

## SEQUENCE LISTING

<110> EXELIXIS, INC.  
 <120> SULFS AS MODIFIERS OF THE BETA CATENIN PATHWAY AND METHODS OF USE  
 <130> EX04-057C-FC  
 <150> US 60/495,172  
 <151> 2003-08-14  
 <160> 11  
 <170> PatentIn version 3.2  
 <210> 1  
 <211> 5699  
 <212> DNA  
 <213> Homo sapiens  
 <400> 1  
 ggagttctca gacctccagt ttcagccctg cctcagcct ccaatccgta agagacaccc 60  
 agccccagca attggattgg gcagcccgtc ttgacacacc actgtgctga gtgcttgagg 120  
 acgtgtttca acagatgggt ggggttagtg tgtgtcatca cattcgagtg gggattaaga 180  
 gaaggaaggc tgcccttgctg gagctgtgtg gtcttctcca agtgagagtc gcaggcaata 240  
 gaactacttt gcttttggag gaaaaggagg aattcatttt cagcagacac aagaaaagca 300  
 gttttttttt cagggattct tcacttctct tgaacaagga actcactcag agactaacac 360  
 aaaggaagta atttcttacc tggtcattat ttagtctaca ataagttcat ccttcttcag 420  
 tgtgaccagt aaattcttcc catactcttg aagagagcat aattggaatg gagaggtggt 480  
 gctgacggcc acccaccatc atctaaagaa gataaacttg gcaaatgaca tgcaggttct 540  
 tcaaggcaga ataattgcag aaaactctta aaggacccta tctgcagatg ttctgaatac 600  
 ctctgagaat agagattgat tattcaacca ggatacctaa ttcaagaact ccagaaatca 660  
 ggagacggag acattttgtc agttttgcaa cattggacca aatacaatga agtattcttg 720  
 ctgtgctctg gttttggctg tcctgggcac agaattgctg ggaagcctct gtctgactgt 780  
 cagatccccc aggttcagag gacggataca gcaggaaaca aaaaacatcc gacccaacat 840  
 tattcttggt cctaccgatg atcaagatgt ggagctgggg tcctgcaag tcattgaacaa 900  
 aacgagaaag attatggaac atgggggggc caccctcatc aatgcctttg tgactacacc 960  
 catgtgtctg ccgtcacggt cctccatgct caccgggaag tatgtgcaca atcacaatgt 1020  
 ctacaccaac aacgagaact gctcttcccc ctctgtggcag gccatgcatg agcctcggac 1080

ttttgctgta tatcttaaca acactggcta cagaacagcc ttttttggaa aatacctcaa	1140
tgaatataat ggcagctaca tccccctgg gtggcgagaa tggcttggat taatcaagaa	1200
ttctgccttc tataattaca ctgtttgtcg caatggcatc aaagaaaagc atggatttga	1260
ttatgcгаа gactacttca cagacttaat cactaacgag agcattaatt acttcaaaat	1320
gtctaagaga atgtatcccc ataggcccggt tatgatgggt atcagccagc ctgcgcccga	1380
cggcccgag gactcagccc cacagttttc taaactgtac cccaatgctt cccaacacat	1440
aactcctagt tataactatg caccaaatat ggataaacac tggattatgc agtacacagg	1500
accaatgctg cccatccaca tggaaattac aaacattcta cagcgcaaaa ggctccagac	1560
tttgatgtca gtggatgatt ctgtggagag gctgtataac atgctcgtgg agacggggga	1620
gctggagaat acttacatca ttacaccgc cgaccatggt taccatattg ggcagtttgg	1680
actggtcaaг gggaaatcca tgccatatga ctttgatatt cgtgtgcctt tttttattcg	1740
tggtccaagt gtagaaccag gatcaatagt cccacagatc gttctcaaca ttgactttggc	1800
ccccacgac ctggatattg ctgggctcga cacacctcct gatgtggagc gcaagtctgt	1860
cctcaaaact ctggaccaga aaaagccagg taacagggtt cgaacaaaca agaaggccaa	1920
aatttggcgt gatacattcc tagtggaaag aggcgaattt ctacgtaaga aggaagaatc	1980
cagcaagaat atccaacagt caaatcactt gcccaaatat gaacgggtca aagaactatg	2040
ccagcaggcc aggtaccaga cagcctgtga acaaccgggg cagaagtggc aatgcattga	2100
ggatacatct ggcaagcttc gaattcacaa gtgtaaagga ccagtgacc tgctcacagt	2160
ccggcagagc acgcggaacc tctacgctcg cggcttccat gacaagaca aagagtgcag	2220
ttgtaggggag tctgtgtacc gtgccagcag aagcgaaga aagagtcaac ggcaattctt	2280
gagaaccag gggactccaa agtacaagcc cagatttgtc catactcggc agacacgttc	2340
cttgctcgtc gaatttgaag gtgaaatata tgacataaat ctggaagaag aagaagaatt	2400
gcaagtgttg caaccaagaa acattgctaa gcgtcatgat gaaggccaca aggggccaaг	2460
agatctccag gcttcacgtg gtggcaacag gggcaggatg ctggcagata cgacgaacgc	2520
cgtggggcca cctaccactg tccgagtgac acacaagtgt ttattcttct ccaatgactc	2580
tatccattgt gagagagaac tgtaccaatc ggccagagcg tgaaggacc ataaggcata	2640
cattgacaaa gagattgaag ctctgcaaga taaaattaaг aatttaagag aagtгagagg	2700
acatctgaag agaagggaag ctgaggaatg tagctgcagt aaacaagct attacaataa	2760
agagaaagggt gtaaaaaagc aagagaaatt aaagagccat cttcacccat tcaaggaggc	2820

tgctcaggaa gtagatagca aactgcaact tttcaaggag aacaaccgta ggaggaagaa	2880
ggagagggaag gagaagagac ggcagaggaa gggggaagag tgcagcctgc ctggcctcac	2940
ttgcttcacg catgacaaca accactggca gacagcccg tcttggaacc tgggatcttt	3000
ctgtgcttgc acgagttcta acaataaac ctactggtgt ttgctgacag ttaatgagac	3060
gcataatctt cttttctgtg agtttgcctac tggctttttg gagtattttg atatgaatac	3120
agatccttat cagctcacaa atacagtgc cacggtagaa cgaggcattt tgaatcagct	3180
acacgtacaa ctaatggagc tcagaagctg tcaaggatat aagcagtgc acccaagacc	3240
taagaatctt gatgttggaa ataaagatgg aggaagctat gacctacaca gaggcagatt	3300
atgggatgga tgggaaggtt aatcagcccc gtctcactgc agacatcaac tggcaaggcc	3360
tagaggagct acacagtgtg aatgaaaaca tctatgagta cagacaaaac tacagactta	3420
gtctggtgga ctggactaat tacttgaagg atttagatag agtattttgc ctgctgaaga	3480
gtcactatga gcaaaaaaa acaataaga ctcaaactgc tcaagtgac gggttcttgg	3540
ttgtctctgc tgagcagctg gtgtcaatgg agatggcctc tgctgactca gatgaagacc	3600
caaggcataa ggttgggaaa acacctcatt tgaccttgcc agctgacctt caaacctgc	3660
atttgaaccg accaacatta agtccagaga gtaaacttga atggaataac gacattccag	3720
aagttaatca tttgaattct gaacactgga gaaaaaccga aaaatggagc gggcatgaag	3780
agactaatca tctggaacc gatttcagtg gcgatggcat gacagagcta gagctcgggc	3840
ccagccccag gctgcagccc attcgcagcg acccgaaaga acttccccag tatggtggtc	3900
ctggaaagga catttttgaa gatcaactat atcttctctg gcatctccgat ggaatttcag	3960
ttcatcagat gttcaccatg gccaccgcag aacaccgaag taattccagc atagcgggga	4020
agatgttgac caagggtggag aagaatcacg aaaaggagaa gtccacagcac ctgaaggga	4080
gcgcctctcc ttcactctcc tctgattaga tgaactgtt acctaccct aaacacagta	4140
tttcttttta acttttttat ttgtaacta ataaaggtaa tcacagccac caacattcca	4200
agctaccctg ggtaccttgg tgcagtagaa gctagtgcac atgtgagcaa gcggtgtgca	4260
cacggagact catcgttata atttactatc tgccaagagt agaaagaaag gctggggata	4320
tttgggttgg ctgtgttttg attttttgct tgtttgtttg ttttgtacta aaacagtatt	4380
atcttttgaa tatcgtaggg acataagtat atacatgtta tccaatcaag atggctagaa	4440
tgggtgcctt ctgagtgctc aaaacttgac acccctggta aatctttcaa cacacttcca	4500

ctgcctgcgt aatgaagttt tgattcattt ttaaccactg gaatttttca atgocgtcat 4560  
 tttcagtttag atgatttttg actttgagat taaaatgcc a tgtctatttg attagtcetta 4620  
 tttttttatt tttcaggct tatcagtctc actgttggtc gtcatttgga caaagtcaaa 4680  
 taaaccccca aggacgacac acagtatgga tcacatattg tttgacatta agcttttgcc 4740  
 agaaaatggt gcatgtgttt tacctcgact tgctaaaatc gattagcaga aaggcattggc 4800  
 taataatggt ggtggtgaaa ataaataaat aagtaacaa aatgaagatt gctgtcttc 4860  
 tctgtgccta gctcacaagc gttcatcata catcacacct ttaagattgc tatatttttg 4920  
 gttattttct tgacaggaga aaaagatcta aagatctttt attttcatct tttttggttt 4980  
 tcttggcatg actaagaagc ttaaatgttg ataaatatg actagttttg aatttacacc 5040  
 aagaacttct caataaaga aaatcatgaa tgctccacaa tttcaacata ccacaagaga 5100  
 agttaatttc ttaacattgt gttctatgat tattttgaag accttcacca agttctgata 5160  
 tcttttaaa acatagtcca aaattgtttt tgaaaatctg tattcttgaa aatatccttg 5220  
 ttgtgtatta ggttttttaa taccagctaa aggattacct cactgagtc a ttagtacct 5280  
 cctattcagc tcccaagat gatgtgtttt tgcttaacct aagagaggtt ttcttcttat 5340  
 ttttagataa ttcaagtgtc tagataaatt atgttttctt taagtgttta tggtaaacct 5400  
 ttttaagaa aatttaatat gttatagctg aatctttttg gtaactttaa atctttatca 5460  
 tagactctgt acatatgttc aaattagctg cttgcctgat gtgtgtatca tgggtgggat 5520  
 gacagaacaa acatatttat gatcatgaat aatgtgtctt gtaaaaagat ttcaagttat 5580  
 taggaagcat actctgtttt ttaatcatgt ataatttcc atgatacttt tatagaacaa 5640  
 ttctggcttc aggaagtct agaagcaata tttcttcaa taaaagggtg ttaaacttt 5699

<210> 2  
 <211> 1013  
 <212> DNA  
 <213> Homo sapiens

<400> 2  
 ctccagaagct gtcaaggata taagcagtcg aacccaagac ctaagaatct tgatgtttgga 60  
 aataaagatg gaggaagcta tgacctacac agaggacagt tatgggatgg atgggaaggt 120  
 taatcagccc cgtctcactg cagacatcaa ctggcaaggc ctgaggagc tacacagtgt 180  
 gaatgaaac atctatgagt acagacaaa ctacagactt agtctggtgg actggactaa 240  
 ttacttgaag gatttagata gagtatttgc actgctgaag agtcactatg agcaaaataa 300

```

aacaataag actcaaactg ctcaaagtga cgggttcttg gttgtctctg ctgagcacgc 360
tgtgtcaatg gagatggcct ctgctgactc agatgaagac ccaaggcata aggttgggaa 420
aacacctcat ttgaccttgc cagctgacct tcaaaccttg catttgaacc gaccaacatt 480
aagtccagag agtaaatctg aatggaataa cgacattcca gaagttaate atttgaattc 540
tgaacactgg agaaaaaccg aaaaatggac ggggcattgaa gagactaatc atctggaaac 600
cgatttcagt ggcgatggca tgacagagct agagctcggg cccagcccca ggctgcagcc 660
cattcgcagg caccggaag aacttcccca gtatggtggt cctggaaagg acatttttga 720
agatcaacta tatcttcttg tgcattccga tgggaattca gttcatcaga tgttcacat 780
ggccaccgca gaacaccgaa gtaattccag catagcgggg aagatgttga ccaaggtgga 840
gaagaatcac gaaaaggaga agtcacagca cctagaaggc agcgctcctc ctctactctc 900
ctctgattag atgaaactgt taccttacct taaacacagt atttcttttt aactttttta 960
tttgtaaact aataaaggta atcacagcca ccaacaaaaa aaaaaaaaaa aaa 1013

```

```

<210> 3
<211> 4279
<212> DNA
<213> Homo sapiens

```

```

<400> 3
gggccatttc tggacaacag ctgctatatt cacttgagcc caagttaatt tctcggggag 60
ttctcgggag cgcacaggca gctcgggttg cctcgcgatt gagctcgggg tcggggcccg 120
cgccggcctc tccaatggca aatgtgtgtg gctgaggcgc agcgcgaggc ttccggcaaa 180
ggcagtcgag tgttttcaga cgggggcgag tectgtgaaa gcagataaaa gaaaacattt 240
attaacgtgt cattacgagg ggagcgcccg gccggggctg tcgcactccc cgcgggaacat 300
ttggctccct ccagctccta gagaggagaa gaagaaagcg gaaaagaggc agattcacgt 360
cgtttcacgc caagtggacc tgatcgatgg ccctcctgaa ttatcacga tatttgattt 420
attagcgatg cccctcggtt tgtgtgttac gcacacacac gtgcacacaa ggctctggct 480
cgcttcctc cctcgtttcc agctcctggg cgaatccac atctgtttca actctcggcc 540
gagggcgagc agggagcgaga gtgtgtcgaa tctgcgagtg aagagggacg agggaaaaga 600
aacaagacca cagacgcaac ttgagactcc cgcaccccaa aagaagcacc agatcagcaa 660
aaaaagaaga tggggccccc gagcctcgtg ctgtgcttgc tgtccgcaac tgtgttctcc 720
ctgctgggtg gaagctcggc cttcctgtcg caccaccgcc tgaaaggcag gtttcagagg 780

```

gaccgcagga acatccgccc caacatcatc ctggtgctga cggacgacca ggatgtggag 840  
 ctgggttcca tgcaggtgat gaacaagacc cggcgcacga tggagcaggg cggggcgcac 900  
 ttcatacaacg ccttcgtgac cacacccatg tgctgcccct cagctcctc catcctcacc 960  
 ggcaagtacg tccacaacca caacacctac accaacaatg agaactgctc ctgcacctcc 1020  
 tggcaggcac agcacgagag ccgcaccttt gccgtgtacc tcaatagcac tggctaccgg 1080  
 acagctttct tcgggaagta tcttaatgaa tacaacggct cctacgtgcc acccggctgg 1140  
 aaggagtggg tcggactcct taaaaactcc cgcttttata actacacgct gtgtcggaac 1200  
 ggggtgaaag agaagcacgg ctccgactac tccaaggatt acctcacaga cctcatcacc 1260  
 aatgacagcg tgagcttctt ccgcacgtcc aagaagatgt acccgcacag gccagtcctc 1320  
 atggtcatca gccatgcagc cccccacggc cctgaggatt cagccccaca atattcacgc 1380  
 ctcttcccaa acgcatctca gcacatcacg ccgagctaca actacgcgcc caaccgggac 1440  
 aaacactgga tcatgogcta caccggggccc atgaagccca tccacatgga attcaccaac 1500  
 atgtccagc ggaagcgctt gcagaccctc atgtcgggtg acgactccat ggagacgatt 1560  
 tacaacatgc tggttgagac gggcgagctg gacaacacgt acatcgata caccgccgac 1620  
 caccggttacc acatcgccca gtttggcctg gtgaaaggga aatccatgcc atatgagttt 1680  
 gacatcaggg tcccgttcta cgtgaggggc cccaacgtgg aagccggctg tctgaatccc 1740  
 cacatcgctc tcaacattga cctggccccc accatcctgg acattgcagg cctggacata 1800  
 cctgcggata tggacgggaa atccatcctc aagctgctgg acacggagcg gccggtgaat 1860  
 cggtttctact tgaaaaagaa gatgagggtc tggcgggact ccttcttggt ggagagagggc 1920  
 aagctgtac acaagagaga caatgacaag gtggacgccc aggaggagaa ctttctgccc 1980  
 aagtaccagc gtgtgaagga cctgtgtcag cgtgtctgagt accagacggc gtgtgagcag 2040  
 ctgggacaga agtggcagtg tgtggaggac gccacgggga agctgaagct gcataagtcg 2100  
 aaggggccca tgcggctggg cggcagcaga gccctctcca acctcgtgcc caagtactac 2160  
 gggcagggca gcgaggcctg cacctgtgac agcggggact acaagctcag cctggccgga 2220  
 cgccggaaaa aactcttcaa gaagaagtac aaggccagct atgtccgag tcgtcccatc 2280  
 cgctcagtg ccatcgaggt ggacggcagg gtgtaccacg taggcctggg tgatgccgcc 2340  
 cagccccgaa acctcaccaa gcggcactgg ccaggggccc ctgaggacca agatgacaag 2400  
 gatgggtggg acttcagtgg cactggaggc ctcccgact actcagccgc caacccatt 2460  
 aaagtgcac atcgttgcta catcctagag aacgacacag tccagtgtga cctggacctg 2520

tacaagtccc tgcaggcctg gaaagaccac aagctgcaca tcgaccacga gattgaaacc	2580
ctgcagaaca aaattaagaa cctgagggaa gtccgaggtc acctgaagaa aaagcggcca	2640
gaagaatgtg actgtcaca aatcagctac cacaccacgc acaaaggccg cctcaagcac	2700
agaggctcca gtctgcatac ttccaggaag ggccctgcaag agaaggacaa ggtgtggctg	2760
ttgctgggagc agaagcgcaa gaagaaactc cgcaagctgc tcaagcgccct gcagaacaac	2820
gacacgtgca gcatgccagg cctcacgtgc ttaccccacg acaaccagca ctggcagacg	2880
gcgcctttct ggacactggg gcctttctgt gcctgcacca gcgccacaa taacacgtac	2940
tggtgcata ggaccatcaa tgagactcac aatttcctct tctgtgaatt tgoaactggc	3000
ttcctagagt actttgatct caacacagac ccctaccagc tgatgaatgc agtgaacaca	3060
ctggacaggg atgtcctcaa ccagctacac gtacagctca tggagctgag gagctgcaag	3120
ggttacaagc agtgtaacc ccggactcga aacatggacc tgggacttaa agatggagga	3180
agctatgagc aatacaggca gtttcagcgt cgaaagtggc cagaaatgaa gagaccttct	3240
tccaaatcac tgggacaact gtgggaaggc tgggaagggt aagaaacac agaggtggac	3300
ctccaaaaac atagaggcat cacctgactg cacaggcaat gaaaaacat gtgggtgatt	3360
tccagcagac ctgtgctatt ggccaggagg cctgagaaag caagcacgca ctctcagtca	3420
acatgcagca ttctggagga taaccagcag gagcagagat aacttcagga agtccatttt	3480
tgccctgct tttgcttttg attatacctc accagctgca caaaatgcat ttttctgtat	3540
caaaaagtca ccaataacc tccccagaa gctcacaag gaaaacggag agagogagcg	3600
agagagattt cottggaat ttctcccaag ggcgaagtc attggaattt ttaaatcata	3660
ggggaaaagc agtctgttc taaatcctct tattcttttg gttgtgcaca aagaaggaa	3720
taagaagcag gacagaggca acgtggagag gctgaaaaca gtgcagagac gtttgacaat	3780
gagtcagtag cacaaaagag atgacattta cctagcatat aaacctgggt tgcctctgaa	3840
gaaaactgct tcattgtata tatgtgacta ttacatgta atcaaatgg gaacttttag	3900
gggaacctaa taagaatcc caattttcag gagtgggtgt gtcaataaac gctctgtggc	3960
cagtgtaaaa gaaaaaaaaa aaaaattgtg gacattttct ttcctgtcca gataccattt	4020
ctcctagat ttctttgtta tgtcccagaa ctgatgtttt ttttttaagg tactgaaaag	4080
aaatgaagtt gatgtatgtc ccaagttttg atgaaactgt atttgtaaaa aaattttgt	4140
agtttaagta ttgtcataca gtgttcaaaa cccagccaa tgaccagcag ttggtatgaa	4200

```

gaacctttga cattttgtaa aaggccattt cttggggaaa aaaaaaaaaa aaaaaaaaaa 4260
aaaaaaaaaa aaaaaaaaaa 4279

<210> 4
<211> 4915
<212> DNA
<213> Homo sapiens

<400> 4
cacttgagcc gaagttaatt tctcggggag ttctcgggag cgcacaggca gctcggtttg 60
ccctgcgatt gagctgcggg tcgcgggcgg cgccggcctc tccaatggca aatgtgtgtg 120
gctggaggcg agcgcgaggc ttctggcaaa ggcagtcgag tgtttgcaga ccggggcgag 180
tctgtgtaaa gcagataaaa gaaaacattt attaacgtgt cattacgagg ggagcgcccg 240
gccggggctg tcgcactccc cgcggaacat ttggctccct ccagctccga gagaggagaa 300
gaagaaagcg gaaaagaggc agattcacgt cgtttccagc caagtggacc tgatcgatgg 360
ccctcctgaa tttatcacga tatttgattt attagcgatg cccctgtggt tgtgtgttac 420
gcacacacac gtgcacacaa ggctctggct cgcttccctc cctcgtttcc agctcctggg 480
cgaatcccac atctgtttca actctccgcc gagggcgagc aggagcgaga gtgtgtcgag 540
tgagtgtgcg tctgtgtgtc ccggcgaggg tgcgcgctcg gcgccgggag cgcggccagc 600
cgagtccgga ggcacgggga ggtcgagagc cgcggggacc ccagctctgc gttcactgcg 660
ccgtccggag ctggaacttg gggccggggc cggggccgtg gcgccgggag aggcaggggc 720
gggtcgcggg ccgcgcgtcc cccaggccgg agatctgcga gtgaagaggg acgaggggaa 780
agaaacaaag ccacagacgc aacttgagac tcccgcatcc caaagaagc accagatcag 840
caaaaaaaga agatggggcc cccgagcctc gtgtgtgtgt tgctgtccgc aactgtgttc 900
tcctctgtgg gtggaagctc ggccttctgt tcgcaccacc gctgaaaggc caggttttcag 960
agggaccgca ggaacatccg ccccaacatc atcctgggtg tgacggagca ccaggatgtg 1020
gagctggggt ccatgcaggt gatgaacaag acccggcgca tcatggagca gggcgggggc 1080
cacttcacga acgccttcgt gaccacacc atgtgtgtgc cctcacgctc ctccatcttc 1140
actggcaagt acgtccacaa ccacaacacc tacaccaaca atgagaactg ctctctcgcc 1200
tcttggcagg cacagcacga gagccgcacc ttgcccgtgt acctcaatag cactggctac 1260
cggacagctt tcttcgggaa gtatcttaat gaatacaacg gctcctacgt gccaccggcg 1320
tgaagaggat gggctcgact ccttaaaaac tcccgtttt ataactacac gctgtgtcgg 1380

```



aacggggtga aagagaagca cggctccgac tactccaagg attacctcac agacctcatc 1440  
 accaatgaca gcgtgagctt ctccgcacg tccaagaaga tgtaccgca caggccagtc 1500  
 ctcatggtca tcagccatcg agccccccac ggccctgagg attcagcccc acaattattca 1560  
 cgctctcttc caaacgcate tcagcacatc acgccgagct acaactacgc gcccaaccg 1620  
 gacaaacact ggatcatcg ctacacgggg cccatgaagc ccatccacat ggaattcacc 1680  
 aacatgctcc agcgaagcg cttgcagacc ctcatgtcgg tggacgactc catggagacg 1740  
 atttacaaca tgctggttga gacgggcgag ctggacaaca cgtacatcgt atacaccgcc 1800  
 gaccacggtt acccatcgg ccagtttggc ctggtgaag ggaaatccat gccatatgag 1860  
 ttgacatca gggtccggtt ctacgtgagg ggccccaacg tggaagccgg ctgtctgaat 1920  
 ccccatcag tcctcaacat tgacctggcc cccaccatcc tggacattgc agggcctggac 1980  
 atacctgcgg atatggacgg gaaatccatc ctcaagctgc tggacacgga gcggccgggtg 2040  
 aatcggttct acttgaaaaa gaagatgagg gtctggcggg actccttctt ggtggagaga 2100  
 ggcaagctgc tacacaagag agacaatgac aagggtggacg ccaggaggga gaaatttctg 2160  
 cccaagtacc agcgtgtgaa ggacctgtgt cagcgtgtct agtaccagac ggcgtgtgag 2220  
 cagctgggac agaagtggca gtgtgtggag gacgccacgg ggaagctgaa gctgcataag 2280  
 tgcaaggccc ccatgcggct gggcggcagc agagccctct ccaacctcgt gcccaagtac 2340  
 tacgggcagg gcagcgaggc ctgcacctgt gacagcgggg actacaagct cagcctggcc 2400  
 ggacgcggga aaaaactctt caagaagaag tacaaggcca gctatgtccg cagtgcctcc 2460  
 atccgctcag tggccatcga ggtggacggc aggggtgtacc acgtaggcct ggggtgatgcc 2520  
 gccagcccc gaaacctcac caagcggcac tggccagggg cccttgaggga ccaagatgac 2580  
 aaggatgggt gggacttcag tggcactgga ggccttcccg actactcagc cgccaacccc 2640  
 attaaagtga cacatcgggt ctacatccta gagaacgaca cagtccagtg tgacctggac 2700  
 ctgtacaagt ccctgcaggc ctggaaaagc cacaagctgc acatcgacca cgagattgaa 2760  
 accctgcaga aaaaattaa gaacctgagg gaagtccgag gtcacctgaa gaaaagcgg 2820  
 ccagaagaat gtgactgtca caaatcagc taccacaccc agcacaagg ccgcctcaag 2880  
 cacagaggct ccagtctgca tccttttcagg aagggcctgc aagagaagga caaggtgtgg 2940  
 ctgttgccgg agcagaagcg caagaagaaa ctccgcaagc tgctcaagcg cctgcagaac 3000  
 aacgacacgt gcagcatgcc aggcctcacg tgcttcaccc acgacaacca gcactggcag 3060  
 acggcgccctt tctggacact ggggccttct tgtgcctgca ccagcgccaa caataacacg 3120

tactgggtgca tgaggaccat caatgagact cacaatttcc tcttctgtga atttgcaact	3180
ggcttctctag agtactttga tctcaacaca gacccttacc agctgatgaa tgcagtgaac	3240
acactggaca gggatgtcct caaccagcta cagctacagc tcatgggagct gaggagctgc	3300
aagggttaca agcagtgtaa ccccccggact cgaacatgg acctgggact taaagatgga	3360
ggaagctatg agcaatacag gcagttttcag cgtcgaaagt ggcagaaat gaagagacct	3420
tcttccaaat cactgggaca actgtgggaa ggctgggaag gttaagaaac aacagaggty	3480
gacctccaaa aacatagagg catcacctga ctgcacaggc aatgaaaaac catgtgggtg	3540
atttccagca gacctgtggt attggccagg aggcctgaga aagcaagcac gcactctcag	3600
tcaacatgac agattctgga ggataaccag caggagcaga gataacttca ggaagtccat	3660
ttttgccct gcttttgcct tggattatac ctcaccagct gcacaaaatg cattttttcg	3720
tatcaaaaag tcaccactaa ccctccccc gaagctcaca aaggaaaacg gagagagcga	3780
gcgagagaga tttccttgga aatttctccc aagggcgaaa gtcattggaa tttttaaatc	3840
ataggggaaa agcagtcctg ttctaaatcc tcttattctt ttggtttgtc acaaagaagg	3900
aactaagaag caggacagag gcaacgtgga gaggtgaaa acagtcgaca gacgtttgac	3960
aatgagtcag tagcacaaaa gagatgacat ttacctagca ctataaacc ttggttgcctc	4020
tgaagaacct gccttcattg tatatatgtg actatttaca tgtaatcaac atgggaaact	4080
ttaggggaac ctaataagaa atcccaattt tcaggagtgg ttggtgtcaat aaacgctctg	4140
tggccagtgt aaaagaaaat ccctcgcagt tgtggacatt tctgttctctg tccagatacc	4200
atttctccta gtatttcttt gttatgtccc agaactgatg tttttttttt aaggtactga	4260
aaagaaatga agttgatgta tgtcccaagt tttgatgaaa ctgtatttgt aaaaaaatt	4320
ttgtagttta agtattgtca tacagtgttc aaaacccag ccaatgacca gcagttggta	4380
tgaagaacct ttgacatttt gtaaaaggcc atttcttggg agtttttttg tgtgtctggt	4440
tttttaaagt attcaagata ctaccagtca acatcttttt ggaagaaaat gccttgggtt	4500
tagaagattt tcttaaaagg ggagtagatg gttgtagatt gactaaaaag tctaccatac	4560
ttcaagggac tacaggtaag tctcatagta taccagcttt ggtacttcat tttttaaaaa	4620
agtattaatc aattgcaaag aaattcgctt tggccaacct ttctttgtgt atcaggtagt	4680
ctaactgat acaagtagtt gacagatttc aactatcaat caccagtcca acccatttct	4740
catttaacag atgacggaga taatccctaa aagcacccac atttgtttca atgccccaaa	4800

caggccaagg ctccttagca actccctagt ggcgtttttt aaactctcag aaactgttac 4860  
cattatttga aataggcttc cttaacctcc ttaccctta acccaacagg gattt 4915

<210> 5  
<211> 86453  
<212> DNA  
<213> Homo sapiens

<400> 5  
gatccctagca ctttggggat tggagggtggg aggatcactt gaggccagga gttggagacc 60  
agcctaaaca acacagtaac acccccagtt ctacaaaaca cacaaaaaat tagctagcaa 120  
ggtggtgtgc gcttgttagtc ctactgtgctt gggaggctga ggtgggagat tgcttgatct 180  
caggagtttg aagctgcagt gagctatgac tgcaccacta cacttcagca tgggcaacag 240  
tatgaacctt tgtctctaga aaataagtaa ataataaat aattaaaaag gaaagacatg 300  
gccggtatgc gtggcgcatg cctgtaatcc cagcactttg ggaggccaag gtgggtggat 360  
cacctgaggt taggagtttg agaccagcct ggccaatgtg gtgaagctcc gtctctacta 420  
aaaatacaaa aattagccgg gcatagtggc gtgtgcctgt aatcccagct actcgaaaaag 480  
ctgaggcagg aaaatcactt gaaccttga ggtggaggtt gtagtgagct gagatcatgc 540  
tacagcactc cagcctgggc aacagagtga gacttcactc caaaaaaaaa aaaaaaagtc 600  
ataaggaaga gaaaatatac atattattca ttaagtggat catcataaag gtcttcattc 660  
ttttcgtgag gttgagtagg cttgaggagg agaaagaaga ggaatgttg gtctctactgt 720  
cttaggcagc gcagaaatag agaaaaatct gcgtataaca gaacaaatgc agttcaaatg 780  
tgtgttacaa ggggttatgg tattcgtata tatgtatata catacaaata caaacataat 840  
tttgggggaa gagaagaat tcccctcct tatgtgtgaa tattttaatg gcatttagtc 900  
aaacatctga attagcctaa cttacatttg ctgttccacc ttgtgaagac aaatttcccc 960  
agattgcttg tgctggcaaa taacatttca tctaaccctt ttcttaactt tttttttttt 1020  
tttttttttt tttagacag actccctctg tcaccaggc tggagtgcag tgggtgtgac 1080  
tcggcttact gcagcttctg cctcctggat tcaagcaatt ctcatgcctc agcctcccaa 1140  
gtagctggga ttacaggcgt gcacggccac atccggctaa gttttgtatt ttggttagag 1200  
atgggatttc accatgttgg ccaggctgaa actcctggcc tcaagtgcac tgccctgcctt 1260  
ggcctaagt gctgggatta taggcgtgag ccactacgcc tggccctttt tcttaacttt 1320  
taattattca tcagaatagg aaaaatgaga atagaaaaag ctgtctagtt gccagaaaaa 1380

caatcatgct ttgcttagct aaatttcttt tggtaatccc atcattctct tggttagcta	1440
ggtttgaaat ctgagttgtc tttgaatccc accgtactct gattcatttg gtaagcaggc	1500
tttatctggc tttctatttt catgtgtcct gtatttgttc cactttctgt tcctaatttt	1560
agcttccgag gccaaagacc cataatttca tgagggtgtt ttctctgttc tctactgctt	1620
cctgtgacac tcacttaaaa tttagctaga ttttccctaaa tgtatacttt tagccaagct	1680
tatgttgtgc tctaagtttt gtgctacett tccttggtt acagaagaa aaagtaaaaa	1740
ctccctctc tgacatttca aatggtactt tatctgagaa tctatccaag ttaccagcct	1800
taggtcttgc aatttccctg taaaatccct cagttaattg tgatatatac ccattctctc	1860
gaacatggca gagaactatc tccacagggt tttttttttt ttttttgaga cagagtttgt	1920
taccacgctt ggagtgaat ggcgcgatct tgtttcactg caacctccac ttccagggtc	1980
aagtgtattc cctgcctcag cctcctgagt agctgggatt acaggcacgc gccacctgc	2040
cggcetaatt ttgtattttt agtagagacg gggtttcacc atgttggtcga ggctggtctt	2100
gaactcctga ctttaggtga tctacctgcc tcggcctccc aaagtgtctg ggttacaggt	2160
gtgaaccact gtgctcggtc aattttttct tttttaataa ccttttattt ggaagtatac	2220
atttcaaaaa gttacaaaaa tatagtataa agaacatctg gataccggtt atccagactt	2280
acctacttgc ttatttgtat ttgtgtgtc ctactctctt ttctcttttt ctaccacgt	2340
aaacacacac acaatttttt tttttaacca tttaggggtg agttacatat gttatgcttc	2400
tttccctaa tacttctgtt gtattcctac agatagggtc attctcttat ataaccatgg	2460
tacagttaat aacttcataa atggacatcg atgaaatcta tcgcccatac tccagttttg	2520
tcagttgacc taagaaagtc tctttagtagc tttctctatgc ttctgtata gactacagtc	2580
tgggtcagg ttctgcattc agttattatt tctctttggc ctcccttttc ctgggatatt	2640
ttcacagcct gtctttatct cttatgacat tggcattttt gagaacacaa ccttcccta	2700
acctctttac tctgttcagt ggagatgttc ttcattttat gttggtctga aatttccctg	2760
tgattagatt aagatgttat ggattcttgg caggaatact gcatacgcga tgtgatactc	2820
tgagatggag tcatatgacg tccgtctgtc ccttattgtg atgcaaaatt tgatcccttg	2880
gccaaaggtg tgccagattt ctccaccatt tggttttttt gccctctctt ttgccaaagca	2940
ataagcagct tgtggggaaa caatgcagat attctgattc ttttcaagggt ttcttctaga	3000
tttagcatcc attgactctt gtctgatcca gctttttatt gtgatgattg caaaatggtc	3060
attttttctt ttccagcatt cctttcccat taccgctgg atcttggtg tattccataa	3120

tcaatagccc tatgtattgg tgaatggatc atgaattcct attttttgaa tgggtttacaa	3180
ttcacttacc ctgcttaatt atttttagtc tcaaattgtc ctagaagttt ggctagttaa	3240
actcctgtaa gtgggccgct gtgtccttgt ggggaataaa agtttttagag accaagatct	3300
ctctgagtgc taggtgtcct cactacttct gggctgtttt ctcatcttgg cctttttagt	3360
ggatagagct aggaaataat atgcatgctt atacacatac atgtacatat acatactcat	3420
acagtcaccc ctctgtacct gagggtgatt gggcttaaga ccctttgtgt gcacaaaaat	3480
ctgctgatgc ttaagtctct taaactataa agtagcaatt gtatttgcac ataaccatg	3540
ttcaatttct tgtatgcttt aagtcacctc tagattactt ataagaatct aacacagtgt	3600
aaatactgtg taggtgtgtg ttaactgta ttttttaatt tgtattttat tgcgtatttg	3660
tttttttaaa tttatttttt gagtattttt gatccatgga tgcagaatcc acgatacaga	3720
gggcccgaact cgcatgtgtt cattgaaaca tacatatata tatttttagaa atcatgagct	3780
tatatcagta tgtacgtctt tattccatgt ctacaggggt ctttgtactt cattttttat	3840
ttttatgtcc cttattatta tgtgggaatc ctgactctca acccttagtac atttactcat	3900
ttgcctaato ctctaataca tctaaaataa tttcagaatt ggttttttca tttcactgca	3960
ataaacaaac tgaaatagag tggagcattt gtctataatt cttctccacc tcccaatttt	4020
acccaagacc gagagtaaac agttaaaatt taaattgctt ggattagccc tccataccct	4080
ttctccaccc cacttttttt tttttttttt tttttttttt gaggcagtct tggttgctca	4140
ggctggagtg cagtggtgag accttggctc actgcaacct ctgccttctg ggttcacggg	4200
attctctctc ctacgcctcc tgagtagctg caactacagg tgcgtgccac catgccacgc	4260
taatttttgt atctttaata gagacagggc ctaccacagt tgcccaagct ggtctccaac	4320
tcctgaggtc aggcgatccg ccgcctctg cctcccaagg tgcgtggatt acaggagtga	4380
gccaccacgc ccgacctcca cccactttt acttcccacc ttactttctg tataaactag	4440
ttaggggtatt catttgaac aaaattaagt ttatttactt gtttgccttat gctgcctccc	4500
attctgattt ttatttttgt aatatgtaga ataataacat gctttcaaaa gtcaaaatta	4560
tacaaaaggc atacattgct tttgtatccc tccatgccca tttttcttca gttttcttag	4620
gtaaccaact taaatgtttt ctgtcttato ctcccatctt cttttttttg atggtatctg	4680
tatgttttat ttattttatt atacaaaaga tagcgtacta tatatactct tgcactttgc	4740
tttttttctt acttaactga tatctcctgg aaataatgcc ctatcatgcc aaagatct	4800

ttccattca tttattttaa ttgtagtaaa atttacagaa tataaaatac aacttttttt	4860
tcttttaaa actgaatttg gctcttgctc ctcaggctgg agtacagtgg tgcaatctca	4920
gtcactgcga acctctgect ccaggttca agagattctc ctgcctcagc ctcccaagta	4980
tctgggacta caaatgccca acagcatgcc cgtctaattt ttgtattttt ttttagtaga	5040
gacaggtttt caccatgttg accaggctgg tttcaaacct ctgacctcag gtgacctacc	5100
cgccctcagct tcccaaagtg cttgggagta agctacaggt gtaagccatt gtgcccgcc	5160
agaggaccaa cttttgatta aattatagat atccagttcc agggctatct gtgaaaaga	5220
tgttctcttt ttcttggttt gctttggtaa cttgattaat tgattatatt tgcacaagtc	5280
tctttctggc ctctattcag tgccatctc atgcccatac acattgtctg attataggac	5340
tttatttatt tttttgagat agagtctcgc tctgtcactc aggcctgacgt gcagtggggc	5400
acctcagct cactgcaacc tctgcctccc tggttcaagt gattctctg cccagcctc	5460
ctgagtagct gggattacag gtgccacta ctaagcccag ctaatttttt ttttttaagt	5520
agtgacgggg ttttgccatg ttgtccaggt tgatctcgag ctctgactc aggtgatata	5580
ccctccttga cctcccaag ttctgggatt ataggcatga gccactgcac ctggctgact	5640
tgaactttta aagtctcttt tatttgttct tttatcttga aactaggaaa caaatacaat	5700
acctctcca ccagatttca cttggaatac ttataaattt ggatgaagtc atctcttgtt	5760
caggttccct aaatttactg agtcattggc tgccactaag tgaccttcca tctgtgaagc	5820
tagtccctgt aaaccaagaa caggtagcag gccataaac attgacttct tgtataatgt	5880
aaaatctttg tttctctttt aaaaaattt tttaatttat aagatgttta tttaaatgt	5940
tttgtggaag tgaggtatca ctatattgcc taggctagtc ttgaactcct gggctcaaat	6000
aatccccctg cattggttcc cccaagtgtt ggtgctggga ttacaggtgt gagccactgt	6060
gtctgcctc actatctttg ttatagtggg ggacttgtca tacgattata ttataattat	6120
atgacattat atcattatat tgttcttaat tataaagaat agtatatgac ctgatttgta	6180
caatgatttg tccagttatc ctggtaaatt ttatttacct ttgtcttgac ggaatttgat	6240
taagcctatg caaataacgt tattaacatg aaaaaataga cttagttttt actttatttt	6300
gaggtggggc ctactctctc tgacctacct ggagtgcagt ggtatgattg tggctcattg	6360
caatcttgaa ttctggact caagcagtc tgccctagcc tctgagtag ctgggactac	6420
aggcatgcgc caccgctctc aaatgccatt taaaaatttt cctacaaaaa cataatat	6480
taaattgtga gctagaggta gatgaagaag aaaggaaaag ggcttctcca tatagccatc	6540

agaaaacaga atattaaaaa ataacaccag cctgggcaat atggtaagac cccgtctcta	6600
caaaaaataa aaataaaaac attaaactggg cattgtgtgt cacatgcctg tggccccagc	6660
tgctggggag gctgaggtag gaggatcgct tgacgctggg aggctgatgc ctcatgtgagc	6720
cgtgatcgca ccatcgacc ccatcctggg caagagacca agaccctgcc tcaaaaacaa	6780
acaaaaaacg gctgggcatg gtggctcata cctgtagtcc cagcactttg gggagctgag	6840
gcaggttgat cacctgaggt caggagtcca agaccgcct gaccaacgtg gtgaacctc	6900
tctctactaa aaacgtaaaa attagctggg ggtggtgatg ggtgcctgta atccccagcta	6960
ctcgggagcg tgaggcataa gaatcacttg aaccccaggg ggcagaggct gcagtgcagcc	7020
gagatcgcac cattgcattc cagcctggga aacagagtaa gattgtgtct caagacaaaa	7080
aaacaaaagc aaaagaaaa acaaaagaaa aaaccatagt ctgaacaac tgggttaaat	7140
tctgccacta gtccatttag tcctatgcag ttaattctgt ttctcttagg cttattctgt	7200
agtcactttt aagttgtctg cttagatgtt taagatacct agacattttg gccttttagta	7260
tagttttaaa atttaaaaat gttagctcag tagttcattg cccagagtat ttcataaatt	7320
atcaagattt aaaggctactt tgtacagtct ttgcatgag aatctcaac tgcctttga	7380
agacaaatta tagcatatga gtccccaagg gaagcatcgg agagtagcag aagccatcac	7440
ccatttgaca gtaagacatt tctggtactc ttcattcacc tttatagatg tgcattttca	7500
tctgatgccc ctttctcttt ggccctgaag atataatttc atttccagaa ttgtttatca	7560
ctgattgtct caacttttat ttatctgaaa atgtctttat ttcaccctat ttttgaaggt	7620
ttggttcact ggatagaaaa ttctggggtg ttgatttttt tatttcagca ctttaaagtt	7680
gttctgtggt gttgtaacct cctccccttt tttttttga agagttgatt tttaatcttg	7740
ttctcagtat gtgtggctct tttttcttgt ggatactttt aagattttct ttttacgttt	7800
ggtttaaaat agtttgacta tgtatttagg tctagttttc ttgtattta tctcgcatgg	7860
tattctttga gcttcttgga ttgttaaatt tgtgttttca tcaaatatgg aaagttttgg	7920
ccattcttca agtacttttt ctgcactctc gcttcaattt aattctcctt cctctgggac	7980
tccaatcata cttgctagcg catttgattt tcttttgttt tgagggtggg tttcgttctt	8040
gtaccccagg ctggagtcca gtgggtctct tttggctcac tgcaacctcc gcctcctggg	8100
ttcaagcaat tctcctgcct cagctcctga gtagctggga ttacagggtc ttgccaccac	8160
acctggctaa ttttttttgt atttttagta gagatggggt tttgccatgt tggccaggct	8220

ggtcttgaac tcttgacctc aggtgatcca tctgcccag cctcccaaag tgctgggatt 8280  
 acaggtgtga gccaccaggc ccagccgacc atttgatag tttataagtc attaaggttc 8340  
 taacctttt tcttcagtct tcttccttcc tcttcttcaa attggataat tcttttgata 8400  
 tcccttcaag ttcagtgact ttttctgcca actcaatttc taagcactat tcaacaatga 8460  
 aatactttta cctcttattt cattcctaca gcctgtgtt ggggttgata gaggcttcag 8520  
 aaaaggtaac aggtttatca aagttatata cctagtttgt ggcagaactg aaattagaac 8580  
 ctaacttgat tgtttataaa ctacagacca ttttctttcc ataatgccat gatctttatc 8640  
 ttctaataag ttgctgtcag ttaaaatgtt cactactgtaa ctggtgtgag tgggtgtcct 8700  
 ggtagcggt gctacttaat taacaacatt gtcaaattgc agaaaattga agttcttctc 8760  
 atttaaaaaa cggttttcag ttgaagaatt taagtatcct gaagtcagta ataccttgaa 8820  
 ctaactttt tagtagcat tctccagca gtgaagatg gtctgtggtt actcaacaga 8880  
 aaaatttaatt tctaagtaca gactgttttt ttgagacaga gttttgtctt tgttgccag 8940  
 gctggagtgc agtagtgtga tctcctctca ctacaatctc tgccctccag gttcaagcga 9000  
 ttttctgcc tcagcctctc aagtagctcg gggtacaggc atccgccacc acacctgct 9060  
 aatgttttgt attttgtaga gatggagttt caccatgttg gccaggctgg tcttgacctc 9120  
 ctgacctcag gtgatccacc tgccctggcc toccaaagtg ctgggactac aggcctgagc 9180  
 cactgcaccc ggccaccaca tacgttttaa aatcaagact ttggaatccc agactgcggt 9240  
 atcattcatt gtctcgaaaa ttaactcttt ggagtacctc ctcttgagtt gatggatttt 9300  
 tttttttttt tttttttttt ttttgagaca gtctcgtctt gttgccagg ctggagtga 9360  
 gtggtgcgtc gcggctcact gcaagctcca cctcccggtt tcaactcatt ctctgcctc 9420  
 agcctccgga gttagctgca ctacaggcgc ccgccaccac gcccggttaa ttttttttgt 9480  
 atttttagta gagatggggt ttcacatgt tagccaggat ggtctcgatc tcttgacctc 9540  
 gtgatccgcc tgccctggcc tcccaaagcg ctaggattac agacgtgagc cactgcgcct 9600  
 ggccaagttg atggatttaa cttcatgaaa atttttaaac cagtttttgt gtcattctag 9660  
 ttatcaagtg cctttatata aacattttcc taaaattcta gtttetaaag ttctgttaga 9720  
 acctataag ataattagta gtatgggaaa agaattactg gcataagaat gacattctta 9840  
 gttgtagtaa ccgtatattt atatttctcc ttacgtttat ttgaaatta aatttctaaa 9900  
 gtttaagggt aaacatttta attataaatt ctgcattcat gcctcttaat taaaatatga 9960



accaaattca tagaaatcct ataaggcaac gattacttaa aaaccaaaca acttaagtga 10020  
 attgttttta ggtttgattt gccttatgta taaaaataca catttggtga ttttgccctg 10080  
 gataaacac ctctcatatt taaagccaga aaacacatgt tgccagatgg gaactaggaa 10140  
 gagtagtagt ctcatcttgg catcatttcc ttcataatga ccagttcact tgttttacac 10200  
 ataatctcag gttctttcca gctttaattt tctatgattg acggatcaga ttctacatta 10260  
 cggaaccttt tagttacctg ctaactgctg ttacaccact caagatgcgt gataaccagt 10320  
 cagattagaa gatgaaagtc ttggccaggt gcagtggtc atgcctgtaa tcctagcact 10380  
 ttgggaggcc tagtggggca gatcacttga ggtcaggagt tcgaaaccag cctggccaac 10440  
 atgatgagat ctctgtctta ctaaaaaatac aaaacaatta gcctggcgtg ttggcaggca 10500  
 cctgtaatcc cagctactca ggaggctgag gcaggagaat cccttgaacc tgggagggtg 10560  
 aggttgacgt gagtgagat tgtgccactg cactccaggc tgggcgacag agcgagactc 10620  
 tgtctcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagag aagatgaaag tcttcatgat 10680  
 attgctgggc acggtggctc acgcctgtaa tcccagcact ttggaaggct gaggtgggca 10740  
 gaatacctga tttttttttt tttttttttt tggagacagt tttgctgttg ccgccagtc 10800  
 tggagcgcat taccgcgcat tcagctcact gcaacctctg ccttccgagt tcaagtaatt 10860  
 ctctgcctc agcctcctga gtagctggga ttacaggcac ccgccaccac gactggctaa 10920  
 tttttgtatt tttagttaga atggaatttt gccacgctgg ccaggctggt ctgcgtccc 10980  
 tgacctcagg caatccgcct gcctttgcct cccaaagtga tgggattaca ggtgtgagcc 11040  
 accacgcca gcctttaaaa tgaccttttt ttttttttta aagacactct cactctgtca 11100  
 ccctagttgg agtcgacgg cgccatctcg gctcactgca acctctgcct gttgggttca 11160  
 agcgattctg ctgcctcagc tccctgagta gctgggacta caggcacgta ccacctgcc 11220  
 cagctaattt tttattttta gtagagatgg ggtttcacca tgttggccag gctggtctca 11280  
 aacttctgac ctacggtgat ccgccgcct tggcctacca aagtgtgctg ggattacagg 11340  
 agtgagccac cagcgctggc cttaaaataa ttttttacag gagatatcta tagggatagg 11400  
 tcaagaatct acagccttg gctggcgctt aacttgcaaa ggacgtgat ttataactgg 11460  
 ttttaaatth ttagactgg tgggatcttc cacttggtgt ggctggaaaa gaggatttta 11520  
 ttattggaag tccagtaagg ccagttctat ctaaactgtt agaataagctg taagtgatgt 11580  
 ggctttactg agattccatg aaaaaataa aatatttgat gccatgacat aaggcttttt 11640

ttttttttaa ttttttgggt ggattgggta aaagcttggc tctgaagtta gaatgacttg 11700  
 gatttaattt ctagctccac cacttactgg atgtatgact ttgggttgag ttacaccttc 11760  
 gatgtctcag tgttttcaag tgaagtaggg ataataattga actgtacttt catctagctc 11820  
 actattctgt gtttcatagg gctgtcagga ggattaaatg ggagtaataa gtggaatgca 11880  
 tttatcacia tacctcactc agatgttaga gcaagtattt gttcacatag tgatttttta 11940  
 ctttaaaccac taaaattaca cattattttt atataaataa agagtatata ttatttgaat 12000  
 tatgaagtat actttgaagg ctattcttga acccactcct tgaactgaag aacgggacgg 12060  
 tcagttcgta tagtgtacct gctocctgaa tctttcttcc cgaagtcatc ctgcttctat 12120  
 ccttgaagtc acagctatct ttgagttaat aattaacttc atttaaaaaa ctttgaaaaa 12180  
 gtctcatttg gatgtgtcct tgaacaatgt ttagttttct tgtttttttt agctttccaa 12240  
 aaataataat gatgtaattt ggtggcttcc taaattgtaa gatccaacca tgttgtgtat 12300  
 aattcatttt taccatccct gtattgtatt cttttgcatg gcttcattag aattcatttt 12360  
 tcaaactctg aattgataaa cattagagtt tcttctagct ttggaagtgt gaacaactgt 12420  
 gcaatgatca ttttttgat ctctgtttaa atatttttat tgctetaaag ttttaaacia 12480  
 acttgatttt aactgcta atatttgctt tcaatgtggt ggtactact tagaaaaagt 12540  
 aaattttctt tcttttttta aatttttagac aggggtctac actgttgccc aggtggaact 12600  
 gcagtgccat gatcttggtt tactgcagcc tctgcgcgcc agtctcaagc gatactccca 12660  
 cctcagcctc ttgagtagct gggactacag gcgcttgcca ccacacttga ctaattaata 12720  
 tttttacatt tttggtagag atggggattt caacatgttg ccagggttg tctcgaactg 12780  
 agctcaagcg atccacctgc ctccggcctcc tgaagtgtgt ggattacagg tgtgaggcac 12840  
 catactaagc caaaagtaaa ttttcttact gaaatgtttt atacattgtt tcttgtttta 12900  
 ttagctaaat tatttcatat cactttttat ttatcatagg attagcaata agcactgtaa 12960  
 ttttcttaa gtacttgatt tcaaaaaacc aactttatta aagcataata tacatacaaa 13020  
 atatttacca accttaccat tacaatttaa tgagttttga caaatgtgac catcaccaca 13080  
 gtcatgatat aaaacatttc taccattccc taaagtctct tgtgcctctg tgcaatcagt 13140  
 catctccact ggtccctagc aaccagaaga aacctccaac tggctctgct tatgtcacta 13200  
 ctgttttacc ttttctaaaa ttcatgtga atagtattcc catttttgtt gtgttacacc 13260  
 ttttataatt gtcccaccat tcttgatatt tctttttttt ttcattttct ctttcttttt 13320  
 cagttttggg gagtttgtat tgatcttaag gctctctggt ctccactcc tatgtttgggt 13380

ctactgatga gcccatcaaa ggcattttgc atttctgtta gtcttttttg attctaacct 13440  
 gtgctttttt tttttttttt gggaggggga gatggagttt cgctctgtcg cctaggctgg 13500  
 agtgcatgtg tgcgatctcg gctaactgta acctctgcct ccgggttca tgccattctc 13560  
 ctgcctcagc ctcccagta gctgggatta caggtaactcg ccaccaagcc cagctacttt 13620  
 ttgtgttttt agtagagata gggctctccc atattgtcca ggctgtgtctt gaactcctga 13680  
 cctcagggtga tccaccggcc tcggcctccc aaagtgtctg gattacaggt gtgagccacc 13740  
 gcacctggcc taacctttcc ttttgattcc tccttagagt ttttatctct ctgcttacat 13800  
 taccactctc ttcttgcatg ttgtctgctt tcccattag agcccgtaa catattaatc 13860  
 atagttaaga ttccatgatt ggtttttaga tttttagaat aaatgttttt aaagaaccag 13920  
 gctcttcgcc ggcgtgggtg ctcacgcctg taatccagc actttaggag gccgaggtgg 13980  
 gcggatcatg aggtcaggag attgagacca tcctggctaa cgcaatgaaa cccatctccc 14040  
 actaaaaaat acaaaaaaat tagccaggcg tgggtggcgg gcctgtagt cccagctact 14100  
 ctggaggctg aggcaggaga atggcgtaa tgtgggaggg gagccttgca gtgagccaag 14160  
 atcacgccac tgcactccag cctgggcgat agggcgagac tctgtctcaa aaaaaaaaaa 14220  
 aaaaaaaga acctgtgctc tttactgttt actagcgaac ttgggaagca tcattttacat 14280  
 gtattatcaa acctgttttt attttatttt attttgagat ggagtttcgc tctgtcgtc 14340  
 aggttgaggt gccgtggcac aatctctgct cactgcaacc tccacctcct gggttcacgc 14400  
 ggttctcctg cctcagcctc ctgagtagct gggattacag gtgcgtgcca ccatgcctgg 14460  
 ctaatttttg ttatttttag tagagacagg gtttcacat gttgccaag ctggtctcga 14520  
 actcctgacc tcaagtgate ctcctgcctt ggctcccaa agtgcctggga ttacaggcat 14580  
 gagccaccac acctggctga aacctatttt tattattagt gctcatgatt tctcatttaa 14640  
 gaatatacat aatcacacag cttacacaca aatattcata gcaacagtat tcatagtagc 14700  
 agaacaacaa cttaaatctc catcagctga taggtgcata aataaaatgt ggtgtatcca 14760  
 tacagtgaag tattagccag aaataaaaag caatgaagta cagtcagtga gcataataca 14820  
 atgtttcagt caatgaagga ataggaccac atatatgaca gtggttccat aagattatac 14880  
 tgtattttta ctgtaccttt tctatgttta gatatgctta gatacaaaa taccattgta 14940  
 ttacacttgc ctgcgctatt caatatatta acatgcagta taggtatagg tttgttcgct 15000  
 aggagctgta ggcataacca tatagcctag atttaggctg tattatctag gtttgtaag 15060

ggacactctg tgatgtttgc acaatgatga aatggaatga aggcacattt ctcgtaattg 15120  
 atccctgtca ttaagctagg catgactgaa cggatatgtg ctacaatgtt gatgtatttg 15180  
 aaaacactat gctaagtaaa agaagccagt cacaaagaac tagatattgt gtgatgccat 15240  
 ttatatataa tgcctgaat aggtaaatcc ataaagacgc aaatacgtaa gtggttgctca 15300  
 agggcagggg tgaatagggt gaaggttggg ttatatgagg ttgagggggg gggaatggga 15360  
 gcagggggga ataacagcta agggattttg agttcttttt gggataatga aaatgttcta 15420  
 aaattgatta cagtggaggt tacacaactc tgaaatatac taaaagccag tctgtgcactt 15480  
 taagcatata atatgtgaat taatatctca gtaaagctgt taaagaatct agctgatgta 15540  
 tgcaaaactg ctaagaacac tatgatgtca tacagaaatt ttatggaaaa atattacttt 15600  
 cctcatgaca ctgatctcaa aagggtttcct atctcaaaaca ttgttagatt tcaaaaataa 15660  
 gatgttaatt gcaactcactt caaatttttaa aaaaccttat tcagtctttt tatagagggtc 15720  
 atcctgtaat tatatggta atatagaattc cagcagcata tctttttcat gtgtcaagaa 15780  
 agtttacatt gaaaagattg cattcttaaa aagaccatac ccagatccat ctccacttcc 15840  
 tgtttgtoca ctaaacattt gtgagatatt tatggctatc ttgcgcaatg cctccagaaa 15900  
 tcaatgtttg ctctcaagtt tataactaca gtttaaaaaa aattcaccaa aaaattcata 15960  
 atcctggtgg atctgctggt taggactagt tagttaagtg cagtatatatc aagtagaaaa 16020  
 gctccaatta ttttacttga gatgatctga tggctaattc tctcacttcc tttgtgtgtg 16080  
 tgtgtgtgtg tgtgtgtgtg tgtgtgtatt ttatatattt tatatatata tattttttta 16140  
 tttttatttt ttttgagatg gagtcttgct gtgttgccca ggctggagtg cagtggcacg 16200  
 atcttggctc actgcaagct ccacctcccg gggttcacgcc attctcctgc cttagcctcc 16260  
 caagtagctg ggactacagg cgcccaccac cagcccagc taattttttg tatttttagt 16320  
 agagacagga tttcatcatg ttggccagac tgggtctcgaa ctcgtgacct cagacaatct 16380  
 gccgcctcgc gcctcccaaa gtggtgggat ttcaggcgtg agccaccgcg catggccgca 16440  
 tttataattt taaaagctta aatgtgtttt ttttttttgg cgggcgtgtg ggttggggga 16500  
 gatggagctc cagtctgtca ccagggtctc agtgacgtgg tgtgatctcg gctcacttca 16560  
 gcctccgcct tccaagctca gtcttgccac ctaagccacc caagtagctg ggactacagg 16620  
 cgtacacatg cacaccagc taacgttttg tatttttggg agagatgggg ttttgccatg 16680  
 ttgccagtc tggtttcgaa ctctctgggt caagctatct gccctcctg gcctcccaaa 16740  
 gtgttgggat tacgggcatg agccactgtc cctggcaaaa aaaaaaaaaa aaaaagatag 16800

aattcaaaaa ttgtatcttg aatttagtgt tgctcatatg acaacttact gtaaaaggta 16860  
atttatttta agtataggtc acatactata caggggatgc tttcaaaaga caattcctat 16920  
tgataattgt attttattat taaagtcaaa gaatgtctta gtctgcttct tgggtgtctg 16980  
ttctagtgtt ctggtcttct aggggttagaa actaggtagt ttataaaaga aaggtttatt 17040  
tagcacatga ttctggaagc tgggaagtct gagatctggt cagcttctg tgggggcctt 17100  
gtgccatgta gtaacaccac ggtggagaag aggaagggga agcaggcatg tgcaaagtta 17160  
ccaacacaag aggtggtctc actttgtaac aaccactct ttagtccaaa cctgtgggag 17220  
caagaactca agggagttag aaaggcatta atccatctta acgacttact tgctcttaa 17280  
aggcaccact tccgaatacc acatcgcgga ccaagcctca acatgagttt tgtggagata 17340  
aactatatc aaaccatagc aaagaccaa ggttatggcg gtttacttct tgctaagctt 17400  
tcagatatag acatgaaaa cgtagatcg gtaataatat agctttatag tacttaattt 17460  
tgtaacttaa ttaagaata gaattagcct aaatcagc tcaataatct aataaaaggt 17520  
gaactgctgt acaaatagtc cagtttgtat cactgttata aatgagccta tctcatgtgc 17580  
caaaacttta gagtaattgc cttcttacga ttttgtctgt ttccaaaaac ttctaattgg 17640  
agtatgcttt tgaatctgtg taatatttaa catataaagc ctgcattatt tagaagttga 17700  
tattgaaaac ctttaaaact ctgacctcaa atagaatttg cttatgtata accattacat 17760  
gcagctgggtg ggttcaaat tgcgttttct gggctctgc tctgtgaaaa atagtatgta 17820  
ttggacatga gtacatgaca gctgacattt atcaaggata acagggggag ccatattcat 17880  
tttcacattt taaagcaact ttgaaagctt tgcatgtgca cacatgctca acatatgttc 17940  
ctaagcttta aatataattt ccatcatgta ttgcttatca ttaataaag aaactaagt 18000  
taaactttta atgagctcaa tatattaac ttatatgagt acacaagcat ttggaagatc 18060  
agcaatgcag gctacttcat tcatttcat ggaatttato ttttatagtt tctgtgctat 18120  
tacaataat gtaacacatt ccagatagcc cttttgttat atagtgtttg atttggccct 18180  
tctttaattt cattaccata aaattttgtc ctgttgtaga agactaaatg gtagaaatta 18240  
acttttttct aaaccaacta ttgttatatt gctgttctct ttgccaaagt atttatagg 18300  
ctattttact ggaggggtgc ataaatagaa ttggaatggc ataattgta gtctgagttc 18360  
ttagccttta aaaattttct ttaaatgtg ataattcaaa aagaattcta gaataaaact 18420  
gtaaagctca taatgttgc aacttgtaa ttaaaataac accttttgtg gttggatatg 18480

gtttcagata ctgtgacat ttaatatatt tatatgcaga tcacattgac ttgctgcaag 18540  
 gtaacaggag aaatgctttg acttcagaag ataattggc catgcacagc tgtaatccta 18600  
 ctgtcttttc atttcagac atgattcagt agtttaaggc ttgtattcct aggcctgag 18660  
 aagaaagttg aaattttatt ttgtgtatga gaatttttac ttaggttttt gataagtcta 18720  
 gtttgggtg tgaaggtacc atctaaactg ttgggtgttc catacttaaa tagctctctc 18780  
 ttaattttat ttgaaatatg agaagcctga gttctcttc atttctctt tggcagttgg 18840  
 aaaggaagcc atcttattaa gagtgatgaa tagtgaaggg ttttttttag gctaaattgc 18900  
 cagtgtcttt agattaaaa aaattgcaga gcgataagtt atgaacgtta acatgatttt 18960  
 tcaaggaaga agtaatcctt agtcacttgt aaccctaatg ctttctctaa taagagtttc 19020  
 gtttctacaa attcttttga cagagaagtg tatgatatca gagaggtttt tagaaaaacat 19080  
 ttaagtgcc ataagaacaa ttcaagacca ctacccaaac ttcatattgaa gatcttagca 19140  
 tctttgagaa tttagtattt ctcaagagac atctcttaaa ttctctctga ggcaccaaga 19200  
 tttagacaat ttgcttaatt tattcagcta attaaatggg agagtccctt gacccccctc 19260  
 acaggacgtg cgacagggtc gtggctcctc tgttccgtgc tctcaaaccc cttttgggag 19320  
 gaggagcatg cgtgcaggca ggtgcaggat ctggggcgag tgcccttggg ctctgttctc 19380  
 atgggagtggt ccaggggtgg gagtctgcaa ctccccaagc ccaagtaggc atgtgttaca 19440  
 gtatgctctt tttgctttgc cgacctgga cggcttaagt gttaaaccagc tcagggcctt 19500  
 cttggtattc aggtccttgt ccagcatcga ggaagaatca ggtcacacac ggacttgagg 19560  
 atggtgaatg tggggatttt attgagtgat ggagttggct gtcagttgga tggatgagga 19620  
 gctggaagg ggaaggagtg ggaatatgat ctccctctgg aatttggcca tccagtggcc 19680  
 catctctctc ctgaccgtcc tcagccgaac tctctcttgt gttcagatgt tcttctctt 19740  
 ctttctctgc cgtgccattc tgccattctt ctgctctctt gtttgtctcc ttgtggagcc 19800  
 gggggcttgg ggtttatatg ggtacaggat atggggggcgt ggtgggtcaa aaggcaactt 19860  
 ttaggcataa aaacaggaat gttgttctc atttagggtc atgggttttc aggccttgagt 19920  
 ggggccttgg ccagggaact gcctctctct acccagttat tccctgtctc ctgctgtgat 19980  
 cagtaatat ggaattagaa aacacaaata tctttttttg taaactaggt tgtagatctg 20040  
 tttgtagtta agaggccaaa ttccattttt cttaattacc ttgattctgt ctgtaaatgg 20100  
 tacagttctt gagggagcca tttttcgaga gctaccatt tgccagacat cactgaggtt 20160  
 ttgttttacc tgtgggtttt aatcctctca acaactttgt aaaggtgatg gatgtgcatt 20220

ttagagaaga tgaatttgag cttcagagat gtaaatttgg taagggtcatg ctgagctcaa 20280  
 atcagctgtt aagtcctgtgt tcttttcccc tcttcactat gcttcattta agttggattc 20340  
 gttgttttct tgttcactaa tgatgtgtgc ttgtgtgtcc agtttaggaa ttaaccttgt 20400  
 ctattgatto ttggtttcag acaagtatcc catgtctgtc tagagtttgg ctgtgggataa 20460  
 ttgatgatac tatcttttca aattatttat aattcgtgaa agcttatagt tcttttaaca 20520  
 tccatttatt cttctgttct tttttatcat togtaatggc ttcaattat tattttaaaa 20580  
 atcagatagg gagcttgcta tgttgcccag gctggctca aactcctggg ctcaagtgag 20640  
 cctcccacct cagctttcca aagtgtggc aatgtaggct tgagccactg tgcctggcca 20700  
 attctttatc tcattaaagga tcataaacat ttattttaaa ccaatttcaa gatttttatt 20760  
 aagcattgaa ttcactttt gatattgatg aattcttga ctatcttctct tagttcagtt 20820  
 attttttatt tttatttatt ttttttgagg tgggttcttg ctctgtcact caggctggag 20880  
 tgcagtggcg agatctcggc tcaactgcaac cttcacctcc aaggttcaag tgattctcct 20940  
 gccctcagcc tctctgagtag ctgggactac aggcgcctgc cactaccccc ggccaattct 21000  
 tgtattttta ttagagacag tgtttcacca tgttgccag gatggctctg atctcttgac 21060  
 ctctgtatcc gccgccttg gctcccaaa gtgctgggat aataggcgtg agccaccacg 21120  
 cctggcccat tagttcactt tttaaatata ctttaggatt ttagtttatg gtttatatgc 21180  
 tgagtgggaa ataattttt tccctttatt ttggtgttct tttctgtatg tctccctgcc 21240  
 acctatactc ctgtttttgt tgccttcata catttacacc atgctttcag tctagatcta 21300  
 ggatttctaat tctgagatat tattgcaatg ttggtgatat gcattactta ggttttgttt 21360  
 gtgtgtgtgt gtgtatgaga catatatata ttattattat gtatatatta ctttttattt 21420  
 atttagagta ccttttattt cctctacaac tgcctgtggc agtttgaat aataacttta 21480  
 gctattgata ataccttttt tcaccttctt ttcattgagt ttttgtttgg tttctacctt 21540  
 tgagattttt tctgtttacc tgtgagcctt gcttttggtt ttcttatctt gtgcatgatt 21600  
 tcatctctg actgccttg cttgtttctt gtccctggag tcagttgggt tcatggagtt 21660  
 attaatattt tgctttatat tccccctctg tcatgggtcca caaatatatt tgtcatgttt 21720  
 gagcgtaact gtgtcttttg aagttaatac aaaattcgta ttttatctgt cattattata 21780  
 tttggagcaa tgggataagg tgggtttgat tgatagcagc atttctctgt tatectttca 21840  
 ggaagtctcc atgttctttt gatctcacia catggcttgt ttatataggc ctgcagatag 21900

tagataactaa agcatctggt tatttactta cttatctgct tacttgcctt atttacttac 21960  
 caccacccct gactaatctt ttgttatctt gttagagacag tgcctcgcca cattgccacg 22020  
 gctggctctg aactctctgc aagtgacct ctactgtagc ctcccaaagt attgggatta 22080  
 taggcatgag ccactgctcc tggccctaaa acatttatta catgaacgtg gggatctctg 22140  
 gagaagccag acccagtttc aggtctctcag ccccaacctt aatctaataat agtggctctc 22200  
 aacgtgtggt gcgtggactc ccggtagtct ctgagaacct tttaagggtt ctacatgggt 22260  
 aagactattc tcataataat gctaagtgtt tatttgcctt ttctatcccg ttgggtgttg 22320  
 caccgatggt ggaaatgcgg tgatgcataa aattgctgac cccttaccat gaattaaggg 22380  
 agtggcgcca gactccgctc ctaggtagac attgcattct tcaactgcag gagctcataa 22440  
 agaaaaaaaa aaatcagttt tccactgagg attgtccatg atgaagcagc aacactacac 22500  
 ctggccctca ttcccttttt tccttaagta ctttctactg tacccttaag tactgtcgtt 22560  
 ttaatgttct gtgtgatgag aatggaaaat gtgcacaaag acttctgcct gccaaagtat 22620  
 gatggctgtc tccgggaaaa gcaettgcgc agtttggtt gtgaactgaa gtaccactt 22680  
 ttttcatgga acaccatttt tacttggatg agtgacaaac catggctatt gagtcttggg 22740  
 tatttggaga ctgtcttcaa attgagttag gtgaacctgt cactacaggg aaaacatctg 22800  
 actgtattgg ttgacagtga taaaatttga gcttcaagt aaattataag taagtaaact 22860  
 tgaatcgcc accatgagca taacagcctt ttattacttt cctgatgaga tgggtggtga 22920  
 cattaatgaa tgtgggttaa aaaaatttg taatgaaatg taccagcatt tgaaagatct 22980  
 actttaactc agtgaaccag tattatctaa atgacccggt gtttgattat acagtgtatg 23040  
 atgggttaaa gatctgttca gaggcgaagt tagatccaat gcattttaat gagacagcat 23100  
 gaaaattcat ttatatggtt tcagattcca ctttgcaact gtaggagact agaataacc 23160  
 accctaaaat atgcctgttt ggtgtaagga ttatttttag aagcagacac aggagaagtt 23220  
 ctgaaaacag agtagaagtt acccttttgt aagggaataa ttatatctat aaaggaaact 23280  
 tccctgttaa ggggtgtctc ctcatocca ggaaaaggat gactcaatca ctagaaactt 23340  
 actaatggag aaggcataga cttaaatctg tataacaagc ctactgttg ttaccatgc 23400  
 ttttcttggc cacctctcca taactattgc tccctagccc ctgtgccctt ctttatttgt 23460  
 ttcagctgaa gatgatattt aagtctgaat tctaagccac ctcttagaaa tgaaaagatt 23520  
 tactcatttc totgggtatc tctcatggat acatgagata tatttattat atttctgatt 23580  
 ttctcttggc aatttgtctt ttgttaaggg gtctgaccca acttagaact cagatagggt 23640



agaggaaaaa ttattttttt ctctcctata aaactcacct ttaagaaatt accagttggt 23700  
 ttagtgtaat atcaagaaat atccataatt atttataaaa gtttattaaa atagtccttc 23760  
 cttttacaag tacatgtctt tgtgaggcca gattttcttt atatccttaa atcaagataa 23820  
 cattgcaccg gattgaatgc agaagtaa atctgttttc tattaagtca ggtaattata 23880  
 tgcaaatata tgtttttaat tattttataa ttctcattgt ttcagaagtt ttgttttttg 23940  
 caaaaattgt tatttatgtt aatatatgat gggctttaaa aagtgaatga gggccaggta 24000  
 tagtggtc tgcctgta atccagcact taggaggcca ggcaggata tcaactgagg 24060  
 tcaggagttt gagactagcc tggccaacat ggtgaaccc tgcctctact aaaaatacaa 24120  
 aaattagccg ggcattggtg cgggcacctg taatcccaac tacttgggag gctggggcag 24180  
 gagaatcgct cgaactgggg aggtggagggt tgcagttagt caagattgct gcatgcact 24240  
 ccagccagc ctgggtgaca agagcaaac tccatctcaa aaacaaaaa aaacaaata 24300  
 aacaaaaaaa gtgaatgagt ccggcttggt ggctcatgcc tgtaattcca acactttgtg 24360  
 aggccgaggt gggagaattg cttgagccta ggagttggag accagcctgg gaaacatagc 24420  
 aagacctggt ctgtactaaa aattaaaaa atcagctggg catggtggca catgcgtgtg 24480  
 gttccagcta ctctgggagg tgaggtggga ggcacttc agaccagcag atcagggcta 24540  
 cagttagccg tgatcacacc attgcactcc agcctgggtg acagagctga gacctgtct 24600  
 ccaaaaaaaa aaaaaaaaaa aaggtgaatg ttctttaagt tttaatttct aatatggtga 24660  
 atactgacat aacccacata gcagaagta ttacaggttt ccagttttta agaggtaaag 24720  
 gaatcctgag atcaaaaagg ttgaaatcta gtgaatttgg ttggaactct agaagcattt 24780  
 gacttaaac ttacccttg ttgtatttgg tatctgttag cacaccagtt tctgctaca 24840  
 gctgcctcta ttctgtgctg cttaaatacg gaggaggctt gagctaacca atctgaagtt 24900  
 tggccaattt caggggcatt tagttgttaa cctgaatcta cttcttttat tagtaagaaa 24960  
 catactact atagagattt aggactttga acagctgtat aacattatag gatagtctg 25020  
 gtactcagtt gtttctgttt ctgaatcaca aatcggccat taattttaaa taaagacgtt 25080  
 ttgtagcata taatacaatt tctgatgac tacttactag ttgttaatt cctcacaccg 25140  
 agtcacagc tccttgaagg caaaaaaatt cctgttttga tcaacaattc atctacccca 25200  
 agcacttagc ataggggata ctatttcctt ttctatgtg gatgacacc gatatgttga 25260  
 acagtgacca ctcttaagat acttggtgaa gtagggtttg gttttaacca gtttaggtgt 25320

atgggatgatt ttacagaagt tcgtaataaa attttcttgc ctcagatatt ctctaataat 25380  
 aatgaggtgc cccagcttc atttactaga catggatagg caggttttgt gaagtacaga 25440  
 aaaaaagttc tttaaagtta tggatcatgt cacgaggcca ggagtttgag accatcctgg 25500  
 ccaacatggt gaaaccccat ctctactaaa atacaaaaa attagctggt tgtggtggtg 25560  
 cacacctgta gtccagcta ctcaggaggc cgaggcaggg gaattccttg aactcgggag 25620  
 gcagagattg tggtagcgg agattgcacc actgcactcc agcccgggtg acagggcgag 25680  
 actcctcttc aaaaaaaaa aaaaagtta ggatcatgaa actaacattt gaatagcaac 25740  
 aaagaaaaa ccaagctatg ttgtatttta ttttttattt ttatttttta atgttgattt 25800  
 ttaaatgaa tgatgtactt ctctctctct ttgcagtatt ttatattttt gcttactgca 25860  
 catttcttcc ctgaagcaat ctgaccta tggtataaat gtttagctcc acataagacg 25920  
 gtatctattt tttggagagg aatggagagg gtcaagggtt ttattagatt ttacgttctg 25980  
 ataccttta acctttttac cagtgtctcc ccacctcca gaagcaaat aatgttgaaa 26040  
 gcttttttta ttttttaact ttttgatata tattttctta ttcatattt gtattgtgt 26100  
 catcagatga ataattggtt tagagattta ttgaaaaga caaatctat tatcagacac 26160  
 ataacttota gggatatgga aactattatt attgttactg ttttgagacg ggatcttgct 26220  
 ctgtccccc gccagagtg cggtgatcat ggttcactgc agacttgacc tctggggctc 26280  
 aagtgatctt ctacctgag ctctctaaat agctgggacc acaggcacat gctgccatgc 26340  
 ccagctaatt tttgtgttt ttgcagagac agaactctac tatgttgccc aggctggctt 26400  
 caaactgctg ggctcaagca atctcttgc ccagcctcc caaagcgttg ggattacagg 26460  
 tgtgagctac tgaaactggc ccggaacat ttttaaaaaa ggattctttt gaatttaaag 26520  
 ttatttaatg attactgaag agtaataagc tgtgaggcca gaaaaaaag gactgagcca 26580  
 cagactaagc agcagtacag atgatgacct attcaggaag tcttgtagt cagacttgcc 26640  
 gtgtcgtgtt gctagagtta cagatctgct ccaacctctt tgctttataa gaaggacatc 26700  
 tctctgttct acctcaata tcttttcttt gaaaaatcaa ccaaaaagtc ttttattagc 26760  
 tttacattta tttctacagt cttaattttt gtaacatcag tgttgccagg gaacaaactc 26820  
 attgtagcct ctatttttga tattgctgga cagggctaac tttagtacta tagtgggaag 26880  
 tttgttattt tgttttttac tctacaggca ctctggttta ggaattattt tctgtcttgc 26940  
 atttgacctt ggttaacctt cccctcttct attgtttact tagtgtacca tggtaacctt 27000  
 tatgtacctt ccttgctgct ctcagctggt tggttaccag gtggctaagc ttgtcatctc 27060

ttaagcttta acatttactt ctcaatactg tcttttctct tgtgaggtag atggaaagaa 27120  
 tagattagaa gagaatggg catatgctgt gatcatctct cctttacatc tttattgctt 27180  
 attaatttaa tttatatcag atttcatttc tgcctctgtc acatacccac tgcctcctct 27240  
 caccactctt ctttatccag ttcttttctca cttaccttag catggctaaa acccttgggtt 27300  
 tttatttato tctttcttcc tetgtgtgtt ttattttcat tatatgccac agggacaacac 27360  
 ttagggtataa gtactacttt tgatgtagag atacttatgt ctgtcaaagg aaaattaaac 27420  
 tacaaccccc agaggtaaaa aatgggtacac aatactggg tttaaaaaat ctccctcctcg 27480  
 gccgggctca tgcctgtaat cccaggactt tgggaggtg gggtaggttg gtcacctgag 27540  
 gtcaggagtg cgagaccagc ctggccaaca tggcgaaacc ccgactctac taataataca 27600  
 gaaatgaggt gggtaggtg gcagctgcct gtaatcccg ctacttggga ggctgaggca 27660  
 ggagaatcgc ttgaatctgg gaggcggaag ttttagtaag ccgagattgc gccactgcac 27720  
 tccagcctgg gtgacagagc gagactccat ctcaaaaaca aaacaaaaca aaataaaaaa 27780  
 gcccactctc ttctgccct ccagaccagg gtctcactcc cttcàccag gctggagtgc 27840  
 agtggcgca acccttagctc actgtaacct ctgcctcctg ggctcaggtg ataccccccac 27900  
 ctacgctcc cgagttagctg cgactacagg tgtgcgtcac cagccttgcc taagtgtttt 27960  
 gtattttttg tagagacggc gttttgccac ttgcccagg ctggtcttga agtcccggtt 28020  
 tcaagctgtc ctctcatctt ggctcccaa agtgttgaga ttacaagtgt gagccaccac 28080  
 accagccaa attatttctt ttacctctg taaaaggaga accctctctg tattttaaga 28140  
 agatgtggag ttggtcaaaa gtacagctga tgggaaagca aaggagaact ggagtgtgaa 28200  
 aagagaagag gaatgggtgt agttaaaaa aaaatttgta aaaaatagag ttacatacaa 28260  
 gtttacacaa tgggttagag cttacaaggt aggaagcaga gacagaataa gtgtaatatg 28320  
 taaaatgtta tagtaaaaa atggaatatg cttaggataa agaagggaaa acttttgtct 28380  
 aattgggaga tgcgggatg gttttaccag aggtgacaaa ttaactctga agggcaggaa 28440  
 tattctagat ggaaaagcga tgtgggaaag attaaaaaaa aattagtgc ttaaggttaa 28500  
 aaataagga aatgttctag ttacctttat taaaaacttt tagtataaag atcattttgg 28560  
 ggttgctggg ggtgattgat gaggaagaag tatgactggt aacaggttgt ttaactgaa 28620  
 gccaaatca ggtttatgaa gctcagactt aagtctgttc ttatatatga gatagattca 28680  
 gtgtattaaa ttgtagaagt caatgtaacc tttaaaacaa aagagttacc cggctagtta 28740

gtatgctgtc aggagaggggt aacttgattt ggatatggat ggaattggct cccttaactc 28800  
 cctctgtaca gtgtattatc tgtgaacttc aactctgttg ctcatgtaga ggttgagaag 28860  
 tctcttgcca gcaagtttcc agttgcaact aacacctgag ttggctaatt ggtatgccc 28920  
 gttctagcac tctagtctct ggggagttta tgtttaaatt caacttcac aggtttaaac 28980  
 tggaaacataa atgtgcaaga aggaagagag aatggaacct tgcgcataaa ataatttaca 29040  
 ttcagatgct tttctgttca atttatatat taaaaatagg atgttttact ttattgtttc 29100  
 ttgctagccc ttcactcaat atgctggcat tataaagcaa agatagtggg gaagaaatta 29160  
 ccaagaactg aagttgtact gttttcttgt atacatctcc accaaggtag tttctgttag 29220  
 ataccatgtg tatgttttgt ttctaaaaac tgtaggctcc tagctttgct attcattgtg 29280  
 ttcaaacgat tccttctttt tttttttttt taacacttac caaatttaat tgtttttctg 29340  
 ttttctgtt ctgctagcct gagagttcta gtaattggta gtgacattta tcctgtgttt 29400  
 ctggggctaa aatgattctg ggcctgcaaa acgtttgagc tgaatggaa ttaaattgaa 29460  
 aaaaaaaaa aggatgtgt tatactttat cctacaaaa ataatagcaa attatcagcc 29520  
 acaaaacaaa aggatataaa aaatttcct ctctgacaga ggataggaa gcaaaagaaa 29580  
 aataaataag taggccagcg gcggcggtc acgcctgtaa tcccgagcact ttgggaggct 29640  
 gaggcgggtg gatcatgagg tcaggagttc aagaccagcc tttccaagat ggtgaaaccc 29700  
 cgtctctact aaaaatataa aaattagctg ggcgtggtgg tgggtgcctg taatccagc 29760  
 tactcgggag gctgaggcag gagaatcgct tgaacctggg aggcggagggt tgcactgaga 29820  
 ttgcgctact gcactctagc ctggcgacaga gagcaagact ctgtcttaaa aaaaaaaaa 29880  
 aattaaaaaa aattttcttt tctttccct cctacttato tcttcacagc tcttaacttc 29940  
 ctaccagca ttgaaagaaa caaagtagg aggagatact aactggaaga gtcattccact 30000  
 tgaggaggaa gctttataa cagttccagc ttataaaagc tcttccctgc ctccctgt 30060  
 cctttacaca cgttatatt gtcttcagtc ctttctcgt ggtaccagtt ctcttgagc 30120  
 tcctcttatt ttattagtaa gggatatgaat gacggattga aagaagaag attaagaaac 30180  
 tttttgatat ttttaggta gagaaaaaa ccttgtaaga ttaagccctt ggtttaacta 30240  
 gtagtgggta ttttctaagt tgtctgatta ggaatttgag aatttggaat ttcagttttg 30300  
 ggtagaactt ttatgtatga ctgtctcatt cttccaaga aactgttttt tctgattgac 30360  
 ttgagcagtc tctgcttttg catagtgcct gaagcagttt ttaataaacc agttcagatc 30420  
 catagctctt tgaaaaaatt tccataagtt actgtgattc tcaagaata caccaaacct 30480

ctctctaatt agtgtattta atcatacctt gtataagtta gggaaacaag cctgacagat 30540  
 aaactaaatt gctgctggga tagtcaagtg gctccaccat ttaatgatag caaaccaaaag 30600  
 aataacaata cttgactgac cattttaagg tatagtttgt atatgtcgat ctcaaatattt 30660  
 ccttttgctg tgtgagccat tgaccatctc aagtgggaagt aagggttatg ggtaatatatta 30720  
 gaccaccacg aagggcagtt tagtgacatc ggtgggtaat ggttaggtaa ggtacttgag 30780  
 gggagcatta gtatctgctg agcttgagca actccttgcc tctgtcccta atactgcatg 30840  
 cccctaaact atggctgtca taacctctca gtgttcttac tgataagctg agaaatttttc 30900  
 tggctaactg gttggctata gtgtgattca gtagtacaaa tggcttggtt tgggtgggtg 30960  
 ggggaataaa atgcccaga aacatttgat acatatatttg ttggttatga agtctgaaaa 31020  
 aatattgtag ttcacgtctc gccatccaga atctgtgtgt gctctagtggt aaagttaggc 31080  
 atttccctat ctgtaaaatg ggactattat agtaatacat actctggagg gtcctggttaa 31140  
 ataaattaca gtatatatga gatgtctagt attgtactac cacaaaaatta tctccttatt 31200  
 tctcccttat taatttagga aaagtaaaat attttagttg gtttctatgt caatttagat 31260  
 ttactggata acccatctgc tattttggca cactatagct ttttttaggt cctcaaaat 31320  
 aacttcttgc ttgctaactg aacactggta gtgttgattg atatcttttc cttttggaca 31380  
 gggcgtagtt cctgtatcct tgtccattta gctaatttgc tegtgtataat caaacttttt 31440  
 ccctctgtc ttaatcccaa ataaccacaaa ggaaagctga ttagtgctgc taagccatat 31500  
 accaaaattt tcatgggtttt tgagctagca ggtataattc tttgctgctt ttcagcttta 31560  
 attagttagt tattccatga aagttcattt tctaacaatt tattatatat tctgttgatg 31620  
 tetaagcttc aacatgttcc atagcttgaa tgttacgtat agaaaggcct atagtattta 31680  
 taggaaacat tctatccagt tgttgtaaga tacttgttca ttttaaatct tatcatggat 31740  
 atactttgga cttttccata taatatagaa atagcgttag attttgatag cattgaaagg 31800  
 tattctcatt gttactatc tacattaaag taattgtgac gagacgtggt ggctcacgcc 31860  
 tgtaattcca gctcttttgg aggctgaggc ggggtgatca cttgagggtca ggtgtttgag 31920  
 accagcctga ccaatatggt gaaaccccat ctctactaaa aatagaaaaa ctaggccagg 31980  
 gtggtggcag gcgcctgtag tccagctac tcaggaggct gaggcaggag aattgcttga 32040  
 atctgggagg tggagggttc agtgagccga gattgcacca ctgcactcca cccgcccccc 32100  
 gcccccaccc ccgcgccgcg caaaaaaaag taattgcatg gaatatattg cttaaagtca 32160

ggtttttttt ttggacgga gtttcattct tgttgcccag gctggagtag aatggcaca 32220  
 tcccggtctca ctgcaacctc caccctctgg gtccaagcaa tctctctgccc tcagtccccc 32280  
 aagtagctgg gattacaggc atgtgtcacc acgcccggct aattttgtac ttttagtaga 32340  
 gatgggggtt caccatgttg gtcaggctgg tctcgaactc ctgacctcag gtgatccgcc 32400  
 caccctggcc tcccaaagtg ctaggattac aggcgtgagc caccocgcc agccttttaa 32460  
 aaatgcagtc ttaaagtgct cattgccata ttaatacat ttaagtagtg tagcatata 32520  
 ctttttttag tggaaacatt ttagataagg aaaataattg taaaaatggc tcatggatct 32580  
 ggatgataga gtttatattg aaagattgac ttggttttag cctttgaatt ctgataaaat 32640  
 gagaagtctc tctctccagt tctttctctg actttgggtg caggggcttg aaaaggcttc 32700  
 tgagactgga ttgtgtatct tcttggaagt gcattagagg tgcagtgga actcaaaat 32760  
 atggatgcac ctcaaatatg gatgtatgat gtaacttcag gaggacagat tacttgtag 32820  
 caagtatagg tcctaatttc ttttctattc aactataagt gataatatct aattgtaggg 32880  
 agtcagaatt aagaaggac tctatgttaa tagactgttc tttttttct ttttagacg 32940  
 gagtctcact ctgtcatcca ggctggagtg cagtggcgcg gtcttggtc actggcaact 33000  
 tctgcctctc ggggttaagc ttttctctg cctcagctc ctgagtagct gggactacat 33060  
 gtgcattgca ccatgccag ctaatttttg tatttttagt agagataggg ttccaccatg 33120  
 ttggccaggc tgggtctgaa ctctgacct caggtgatcc acccgctcg gcctccaaa 33180  
 gtgctgggat tacaggcgtg agccaccgcg cctggcctag actgttctta caactaaact 33240  
 tagtctgaga ctgttgtgct atattatttg cccttgaag atggcttcta tcaactacat 33300  
 atattctcca aactagatgg gttgtaattt aagatgtaaa aatgtaagct agtctcaggt 33360  
 agttactgtt ccatgtttct tacoggtaa gaacttcagt gtcttggtac ctgccttatt 33420  
 cccctctctc atcttcattc ttgactgttg actgaaagtg atctagatct attgtgtctg 33480  
 tgctaggcat ttacctttta tatcttaate taccaaaata gcatactctc ccagtggaa 33540  
 ggagataaca ggcctggcaa ctaaaacaaa tgccattttt gattttttgt ttatagctaa 33600  
 gattaatacc aaatagaaa ctgtacctga agggtagtc atagtcattt gtgctcagga 33660  
 attattgtat atattgaaat tattattttg gggaccagaa atgctttttt atttctcatg 33720  
 ttgaacattt tcttttagtt aatgaaatc aggagatgtt tgctctactt tgctttttgt 33780  
 tataaaacaa tttgtcattt actcttagac attgtggtat cttatacagt tgtacagtaa 33840  
 atgtacctaa gttttgtcca tgtctaatta agaactacaa atctgtccaa cctgttecta 33900

aaaaacccaa gatagagact ggacatgggtg gctcatgcct gtgattgcag cgctttggga 33960  
 ggctgcagctg ggcagatcag ttgaggtcag gagttcgaga ccagcctggc catcatgggtg 34020  
 aaaccctgtc tctattgaaa atacaaaaat tagccaggcg tgggtggcaca cacctataat 34080  
 ctccagctact cgggaggctg agacgagaat catttgaacc cgggaggcgg aggttgccagt 34140  
 gaactgagat catgccactg cactccagcc tgggtgacag agtgagactc ttgtctcaaa 34200  
 agcaaaacaa aacaaaaaat aagatagaaa tttttatat cttaacaat tataccttta 34260  
 tgttcgggtg aacacctttt tcatgatttt aagttattat ttcccttag ttttttttt 34320  
 ttttttttt ttatagacag aattcactct tgctgcctag gctggagtgc caatggccca 34380  
 atcttggtt actgcaacct ccatctccca ggttcaagca attctctgt ctcagcctcc 34440  
 tgagtagctg gaattacaga catgcaccac cacgtttggc taattttgta ttttagtag 34500  
 agatggagtt tctecatgtt ggtcaggctg gtctgaact ccgacctca ggtgattgc 34560  
 ccatcttggt ccccaaagt gctgggatta catgcatgag gcaccacacc cggccttccc 34620  
 ttagtacctt tttggataat taggttgac tctgaaggag taagtgtgt agcaggaaga 34680  
 ttgcacaggtc ttatgtgtac agtgtagctt gttttgtgag atcaagagaa aaagctgcat 34740  
 gtgtctatgg acatagctcg acatatttag gtttcattat atgcacataa acattggctt 34800  
 aacacaaatg atctgcattt ctggtttaaa ctgataattg tgcttattaa tttttttgca 34860  
 tattaagaga ttgtcatgac ttagtttttc tattgattta atttatgctg tcagaattta 34920  
 ttgtaacact atatcaactg tagaagtaaa catttaaaaa gttaaatgca gtaggattgc 34980  
 attgaatgat tgttatagat cagaataaag gaaatttcta aactatgatt tagtaggttg 35040  
 aatgttgctt ttatatttat tcaatattta tcaagacat atattgacca cctattacat 35100  
 ggtaggcccc ttactcctta ctgagtatc aacttatatt taataacaaa ggaataata 35160  
 ttgagaatat aggcaaaatt ttatctttca aattaaagaa gtgctgttat ccatggaata 35220  
 gtttctccat ttgtttcagg gattcagctt ataacaaaaa gccaaagtaa ggaataata 35280  
 tctagaatgt ggaataaatt acatatttaa aataaagaaa tgtaggctgg gtgtggtggg 35340  
 tcatgcctgt aatcccagca ctttgggagg ctgaggcagg cggataactt gaaccaggga 35400  
 gtccaagacc agcctgggca acatagttag accctgtctc tcaaaaaat acaaaaatta 35460  
 gctgggtgtg gtggtgtcca cctgtgtcc cagctacttg ggatactgag gcaggaggat 35520  
 tgcttgagcc tgggaagccg aggttacagt gagctgagat tgtgccactg cacttcagcc 35580

tgggtgacac agtaagaccc tgtctttaa aaaaaaaaa aaaaaagtt attactcaat 35640  
 ggatagtttg ccattcaatt taaaaatcac ctttgaatga aacaaatata aaaccaatta 35700  
 tagagacata acaagaatta ttctattttt gtacttaagg aatggaatca ctattctttt 35760  
 tatttttatt ttttgagatg gagtccact ctgttaccga ggcctggagt gcagtggcgg 35820  
 gatctcagct cactgcaacc tccgccttcc ggggttcagc gattctcctg cctcagcctc 35880  
 ccaagtagct gggactacag gcgcctgcca ccacgccag ctaatttttg tatttttagt 35940  
 agagacaggg ttaccacata ttggccaggg tggctcagat ctctgcacct tgtgattcac 36000  
 ccgcctcggc ctcccaaagt ggtgggatta caggcgtgag ccaactgcacc tggetcttta 36060  
 attattcaat ttattattat tattgttttt aagagacaga gtctcactcg gtcacccagt 36120  
 ctggagtgcg ttggcgtgat cataactcac tgcagcctca aactcctcaa acaagcagtc 36180  
 ttctgttttt attcctaagt agttaatgct atagggtgag accatgatgc ctggcttatt 36240  
 tttaaaaaaa tttttagtag acagggtggt actgtgttc acagattggt ctcaaaactca 36300  
 agtgcctcaa actcaaaactg cctgagcctc ccaagcact gggattactt gagctactct 36360  
 ttttaaatat gaaaattgga aaatcaaac cgaacatacc ttaagttaa aaactctttt 36420  
 atttgaggat aattttaaac ttaaagcaag gttgcaagaa aatagtacaa agagttttta 36480  
 cgtttatctc cccccgggt caggattcac ctagtgtcaa ctcccttctc catccttgct 36540  
 ctgcctgtcc ccattccag gtttattcac tcaactaata tatatgcaat ttttctaac 36600  
 catctgagga taatttgcat atgtaatagc ctgttaccac aaatattata ctaagaatat 36660  
 tggctcttta aataacgcgc gttcatttat caacttaagt gtattaatat tgacaacata 36720  
 cttttatgct tattgtccat attctaattt tgtcagtga tccaataata ttctttatag 36780  
 cttttcttta cctcttagca caggattcag tctaggatca aatattgcat ttagtgtgca 36840  
 ttttcttata gttctcttta aaatctggac tgtttacaga ctttctttgt cttttgtgac 36900  
 attgacacgt ttgaaaatac aataccctg agattgtgtg atctgactgt gccactacta 36960  
 ataatagtga gccactacta ataaagggta ttttaagtct ttttctgtcc ttcatttaaa 37020  
 cttgtcatgg ggaaaaaaca aatacttaaa tcatctcagc tttttagcct tccattttta 37080  
 caaccaaagt tatagaatga attttcttgg taatttaata catatttagt gcactgttaa 37140  
 agacaatggt gcaatctaga ttttctgatt tatattatga tcatgtgatt ttttaatttt 37200  
 ttattttttt tgtttttttg cttttgattt ttttttttaa gctacacatt tgaagtttga 37260  
 tcagcatctt gagtgaattt tttcattttt ataaatctgt ctctccttct ggtagcatto 37320



tgccacctag tggaaattta tgtcctccag catacgtctc agagtttagt tggaaatgcaa 37380  
 gatgcatttt aatatataaa aattagttta gaatcgttga acttcttttg ttgacatgta 37440  
 attctttaca acagtgatcg tcttgtttta aacaagagtt tagtacagat aaaattetta 37500  
 gcaaatgagg gcttagtaga tgtcttaaat catctttctc aacaagaagt actctacatt 37560  
 tatcttcttc atcaatgaaa ttttaacca agcatactat ttttccatca gtcaaatattt 37620  
 tttttttttt ttgagacgg agtctagctc ttgtcaccca ggctggagtg cagtggtgcc 37680  
 atctcggtc actgcaacgt ctacccctcg gttcaagtg ttctctgcc tcagcctccc 37740  
 aaataactag gattacagcg acctgccacc atggctggct aattttttat ttttagtaga 37800  
 gacgggggtt caccatgttg gccagacggg atttcacat gttggtcagg ctggctctcaa 37860  
 actcctgacc tcagtgatc cacctgcctc gacctcccaa agtgcgggga ctacaggcat 37920  
 gagctaccg acctgcaag atacacattt ttagtaggac ttgaggaaca tttctgtctt 37980  
 ggagtacata cgttctgcat aattcatatt agaatatgaa atctgaggtt gtcttcagta 38040  
 tagtcattta tgaaaagaa tattgagaat tatctgttta gagaaagtag ttctgaatta 38100  
 aaagttgcag tcattcagtc atataacacc ttcataagat catgtatat ttttaattgta 38160  
 cttatctttt ttctcattat tctctcttag ttgctgatgt atattcaaga tgagtggatt 38220  
 aggagaaaac ttggtccac tggccagtga ttcacgaaaa cgcaaattgc catgtgatac 38280  
 tccaggacaa gggtaggtga cttatttctt ggtgctttac cacacttggt gtgctttgt 38340  
 ttaaggataa cattttaact tcttgccatt tacattctct ggtagattt tttggtggtt 38400  
 tcacttcgtg gtaagtagag tgttactgat gagatggaca tctttttgat gtaatagaag 38460  
 tttttttttt attgctgatt catatagaag gtagaatatt aacaattcgc ggtactataa 38520  
 gaatttctga atggaaggag gggtaggagt tacgaataga tgaccaaggt tatgtcacgt 38580  
 gcgtccgtgt gaagagacca ccagactttg tgtgagcaac aaggctgttt atttcacctg 38640  
 ggtacaggca ggctgagtc aaaaagagag tcagcaaagg gtgggtggat tatcattagt 38700  
 tcttataggt tttgggatag gcagtgagtt aggagcaatg tttgcgggc ggggttagat 38760  
 ctcaaaagt acattctcaa gggtagggag aattacaaag aaccttctta aggggtgggg 38820  
 agattacaaa gtacattgat caagttaggg tggggcagaa acatcacaat ggtggaatgt 38880  
 catcagttaa ggcatttttc acttcttttg tggatcttca gttgcttcag accatctgga 38940  
 tgttatgtg caggcttggt ctacaggcc tgacagttat aagtaagaat ctttgcctac 39000

ttttaagaat ggggtataag ttgatatttt gtcatttgtg aggttgcatc ctttttttta 39060  
 ccaagtgaat tgagaagcct aaaaattaga aacaaaataa tgtaatttat ataactac 39120  
 tctatagcct ttaaagtatt tgccaaagtc agtgtcaatt gaagttaat gtgctagtgt 39180  
 aaaaatatca atctacaatg aataaaactt catcattaat aagtagctac cactgttttt 39240  
 gttcttattt gttagtgtgt ttattatctc taagaagtaa agatgattta ttctgtattt 39300  
 ctatagtaag taactgagtc taactctgcc caaggccacc tagctaaca agatggaact 39360  
 gaatttaggt ttacatgaat ctctattatg ttgtactact tctccaagac agcatttttg 39420  
 atagtttata ttggctgagt ttagtttgtt tacatatgaa aataataggc cgggtgtggt 39480  
 ggctcatgcc tgtaatccca gcaactctggg aggccagggt ggggtggatta cctgaggcca 39540  
 ggagttcaag accagcctga ccaacatggt gaaacatcgt ctcaactaaa aatgcacaaa 39600  
 taagccaggc gtggtggcgc atgcctgtaa tccagctac tggggaggct gagtccaggag 39660  
 aattgcctga atcctggagg tggagggtgc attgagccaa agtcgcaccg ttgtactcca 39720  
 gcctgggcaa caagagcgaa aactctgtct cgaggaaaaa aaaaaaaag taatcatgta 39780  
 atagtgtgt ataggggctg attctgctaa cagctctttt gtgatataa tattatgtct 39840  
 cctttccccc ctttctacgc cttttccctt agtcttaact gcagtgggtga aaacaggaga 39900  
 cgggagcagc aaagtaata tattgaagaa ttggctgagc tgatatctgc caatcttagt 39960  
 gatattgaca atttcaatgt caaacagat aaatgtgcga ttttaaagga aacagtaaga 40020  
 cagatacgtc aaataaaaga gcaaggtaat aaaaacactc atgtcttttt gaacagtgtt 40080  
 ggttcccaac ctttttgcca ccagggactg gttttgtgga agccagtttt tccatggacc 40140  
 tggtagaggg gatggtttca ggatgattca agcacattac gtttgtggtg cattttattt 40200  
 ctattatggt tacattgtaa catataatga aataattata caactacca taatatagaa 40260  
 atcagtagga gccctgagct tgttttctg cagctagatg gatccatctg ggggtaatgg 40320  
 gagaaactgt gacagatcat taggcattag agaatcataa ggagcacaca acctagattc 40380  
 ctgcgatgtg gagttcacat taagatttgc acacctgtga gaatctaagt ctactctgta 40440  
 gctgacagga tgtagaactc aggtggtaat gtgagtgtg gggagggggt gttgttaata 40500  
 cagatgaaac tttgtcact tgcccactgc tgacctctg ctgtgcagcc ccattcctaa 40560  
 caggccacag actgatactt gtctgtggtc tgggggttgg ggacccctgt tttagaagga 40620  
 acttgtgtct atatttgct ttttgcctct ttgtttgggt agagactaca actgatggag 40680  
 gctagcaagt atgggaatag acaaatgtgt tgaccagctg tgctttttgt tatttatgta 40740

ttattttatt ttgagatggg gtctcgcttt gtctctcggg ctggagtgca gtgggtgat 40800  
 ctgagctcac cacaacctcc acctcttggg ttcaagagat tctcctgcct cagcctcccg 40860  
 agtagctagg attacaggca cctgccacca cgccagcta agttttgtat ttttagtaga 40920  
 gatggggttt tgccatgttg gccaggtcg gtctcaaactc ctgacctcag gtgacctacc 40980  
 cgcctcagcc tcccagagtg ctgggattac aggtgttgagc caccgcgctg ggcctccagc 41040  
 ttatgctctt tagagacggt taacagacaa ttgcctgtta ttggtagtt ccttttcagg 41100  
 aagctgtggg atagtacatt tagtagtgaa atgatttagg tatctctctg ctctctgggc 41160  
 aactatgaag tttagttttg atgttataat attgtagcat cattctctta tgaggaaatg 41220  
 tttttagtgt atgtatgggc atgtgcatgt gtatctttat gtctctctg gggactatct 41280  
 gaaggtgatt taactctaaa ctgatatgtt gttattcgtt ataccacctt ctgtcttttc 41340  
 agggaaaaact atttccaatg atgatgatgt tcaaaaagcc gatgtatctt ctacagggca 41400  
 gggagttatt gataaagact ccttaggacc gcttttactt caggcaagta taaagatttt 41460  
 aactgtccag taggctgtat tgccctttgg tttattataa agttataaaa aatcgatgaa 41520  
 attttggtta ggaatgaga acaaaaagaa aacatttttt tctttgagac agttcagtat 41580  
 tctgaatag atggtaaaat gctcttataa ttacaatata cataattcag gaagccttgc 41640  
 cccctagta aaaatatagt tgcaaaactga ggaaccacac atatacaaac ataaaaatat 41700  
 aagcaagcag gaaaggaaaag gtacgctgta atttcacaga gatatttggg tacaatggc 41760  
 ccttcatact catgggtttt gcaccacaga tttggagggt gaggaagaaa taaaaataa 41820  
 tgttaaaaca ataaaaaaca cctcagtggt atgactatat agcacttaca ttgtattagg 41880  
 tattataact aatctagaga tgatttaag tatattggaa tatatgcata ggctataggc 41940  
 aaatacacca ttttatattg gagacttgag catcctcaga ttttgcatac tttgggagg 42000  
 cttggaacca accttacaca gatactgggg tatgatgact gtacgtttcg gctcagacat 42060  
 ttttggtaaa tttttcgctg attgatcaca tggcacgcta tggttttata tctctgagga 42120  
 attgttaaga cttaaacatg tgctttgtat ttgtttagg gctgaagccc ttcataaagt 42180  
 taactgttca actctttttt gtttcaggta gtttgttcca actactttta gttgatcagt 42240  
 ttgaaatct ctctttgtaa attctcatta aggaatagta gagcagtttc tgtagcttga 42300  
 cttggcatca aatggaaaaa tgggaagagc taaggatgct tttctcattt ttaaaagctc 42360  
 ctttaaagat ataattcttt aaaaattagg ttagacatta attcagattt catgctgaac 42420

atatttatgt acacactccc ccacccccaa ttattottct ttttttttcc cccagtaag 42480  
 gctgtagta atgggtgctaa tgtagtagt aatgggtgct tatagtgtt tgcagtaatt 42540  
 aagtcagcag tagtttttac acattctact tactactgtg gttgctgtt gctgatacta 42600  
 ccatacaaaa ataccacaga cttggtaggt gaaaccaaat aaatttattt cttacagtgt 42660  
 tggtaggtgg aagtcaggga tcaaggtgtc agcaggattg gcttctcctt ggctgtgcac 42720  
 tgtgttctcc catggccttt ttctctgctg gcacattcct ggtgtcttcc tctccccctta 42780  
 taggatacca gtcataattg attaggggtc ccaccggtat gacctcattt atctttaatt 42840  
 acctccttga aggtcttggt tccaaatata gttacactga tggtagaggt ttcaatttaa 42900  
 gaattagagg gagggaggata caattcagtc cataacagcc tgtattaaca tatcctattt 42960  
 taggcattgg atgggttctt atttgtggtg aatcgagacg gaaacattgt atttgtatca 43020  
 gaaaaatgtca cacataacct gcaatataag caaggaggacc tggtaaacac aagtgtttac 43080  
 aatatcttca atgaagaaga cagaaggat tttcttaaga atttaccaaa atctacaggt 43140  
 aggccttttaa tgtgtatttt cttaaaggt taaatttttt tctttgacca tttcttagaa 43200  
 aattgaatgt atcttttagg aagtcagcg atcaaatgag ggtagaaagg catgtgattt 43260  
 aatagcagaa ttttcacata tggagtcagt gaattaaaaa tttggtatcc attttaagag 43320  
 gcataatgtt acaaaatagc cagttagatt tctgttaaag ttgaaattat tcacatgttt 43380  
 tgtatattgc cagcctgaaa tgtagtata gatataacta tggaaaacat gcataatgag 43440  
 aaaaatgcagc ttgaattctt gatgatggtc atagaatgag ttaccagctt tttaaaatgt 43500  
 catttcaatt tgttttccaa agttaatgga gtttcttgga caaatgagac ccaaagacaa 43560  
 aaaaagccata catttaattg cgtatgttg atgaaaacac cacatgatat tctggaagac 43620  
 ataaacgccca gtcttgaaat gcgccagaga tatgaacaaa tgcagtgctt tgcctgtctt 43680  
 cagccacgag ctatgatgga ggaaggggaa ggtaagagct attatatgtt tgtgatgttc 43740  
 atgaaacaaa tagtggccat acttggagtt ttgaaacttg tgtgttaacc cttcttactg 43800  
 aattccatgt. ctttgcttgc ctattgaaca tatatatcca aaagttaagt ataactctta 43860  
 ccagggtgaa ttttttattg tagatttgca atcttgtagt atctgtgttg cagccgcgat 43920  
 tactacagga gaaagaacat ttccatcaaaa ccctgagagc tttattacca gacatgatct 43980  
 ttcaggtaaa aactcttttt ttgtctctct ctctctctgt gtatcgtac atttttattt 44040  
 tggaaatttt tgtaaatgtt actattttta atctgtacta tcatagaaat gtatacctac 44100  
 tgtaatgagt gctttatgtg tatctttttt catgttgctt atgcaacctt aaaagaattt 44160

cactaaaatt cttggcattt gaattgggta tgtttggcat tttaaatccc ccagataaat 44220  
 taaaaaaaaa atttaggggc acctgggtttt ctctccaaat tgcattttgc gtcagaattt 44280  
 agtattttctt taacttcaag cccattttgc ataaagaaac atgttttaaa aaattataag 44340  
 taatttaatg agaattattg ggagtaattc cttttttttt ttttttttgt tgagacggag 44400  
 tcttgctctg ttgccaggc tggagtgcaa tggtcgcgac tcggtcact gcaacctcca 44460  
 cttcttgggt tcaagtgtt ttctgcccac ggccctccaa acagtttgga ctacaggcac 44520  
 gtgccaccat gcccggttaa tttttgtatt tttagtagag atgggggttc accatgttgt 44580  
 ccaggctggt ctgaactct tgacctcaag tgagtcgcct gcctcagcct cccaaaatgc 44640  
 tgggattaca gttgtgagcc actgtgcttg gccgggagta attcttgacg tcaacctgag 44700  
 tttcaatctt ggtctgcat tttttaatca tagaataaaa aaattaaaga catcgtgggt 44760  
 gataagatgc attaatgaaa ttaaacactg tggcaatatt atttttattt accttcaggg 44820  
 ttactcttat ggtcacctaa gtgtaaatgg ggatgccaa ggtttgtcat atatcccca 44880  
 tctcagagat aaagaacag aagcttggtg acagagattg ggttattgtc caagatcatg 44940  
 gctaataaga aaatttatag ctgagttctg ctgacttagc ctgtattctt tgccttttgt 45000  
 aacactaatt ttacaatgtg gacttttaac aagtgtata aaaaaggagt aggtatacat 45060  
 aaaacatagc tatcactatt acatatgtat gtgtgtgttt gtaatatgta tatataatat 45120  
 acataatgca gaatattttt aaagaaatat tgctattttt gcagtcattc aatcatttta 45180  
 tgccatcagt aacctatctt caggattttt gagattaatt ttcacaatta aaagtagcaa 45240  
 aggtattttt tgacaattca cagtataatc ttgtttacgc tgatggatgt tacttttttt 45300  
 tttttttgag acggagtttt gctctgtcgt gccagggtg gagtgcaatg gcattgatctc 45360  
 agctcactgc aacctctgac tctgggttc aagtattct cctgcctcag cctcccgagt 45420  
 agctgaaatt acaggcgccc atcaccacgc ctggctaatt ttttacattt ttagtagaga 45480  
 cagggtttca caatgttgtt caggctggtc tcaaagtcct gacctcaggt aatccgcctg 45540  
 cctgggcctc ccaaagtgtt gggattacag gcatgagcca ccatgcccg ctgtatgtta 45600  
 ctttatattt gaacattttc tctgtattaa ctcccctcag ataaacatag tgacagcaat 45660  
 tgttatatat tattttatcc ttttagagtg agtctttctc tgcacctctt atgatttggc 45720  
 agtgtaatt ttctacttga atagccatgt ttacatttg ctactgaaga tactaaataa 45780  
 aatatcttta agcaatttag caagtagcat ctttgaaaat tatctcatca gtatataaaa 45840

gtgatacatg tttattataa aagtttagaaa ttaccaagca tgaagaaaaa caggacatga 45900  
 tggagaaaaa aattgccaaag caagaaagat caaatgcttt gtgtgattaa catcatttaa 45960  
 aactgagatc ctacttactt ttgacctctg gggatatttt atcttctgtc cctgatgtgt 46020  
 ttcatattaa aaacttttta tggacatctg ttttgtattt gtcattgtgc ccagggttaa 46080  
 actcaggaga ggtggttgag gacaaatcat gtctattttg ggcacagatg cacagggtatt 46140  
 tactctttcc cagaatgogt ttatcccttt tccttagtct cccctgcta ctaataagat 46200  
 ttttggctac cattaaaatt ctgaatttta aacagattat tggactgggt gtttatttct 46260  
 gtcagcttat tcaatatttag tgctttttaa atctccagta gcttttgag aattaccttt 46320  
 cactatgaag cccatgaggt tttcccaaac caaactgggt tttcttcagt atgttttcta 46380  
 atgaatatgt catagaaagg ataaatatat gggcaagact tttttttttt tttttttttt 46440  
 ttgagacgga gtctgctctt gttgccagg ctggagtgca gtggcgagat ctcggtctac 46500  
 tgcaacctct gcctcccggt tccaaccat tctctgctc cagcctccc agttgctggg 46560  
 actacaggta tgtgccacca cactcagcta attttttgta ttttttagtag agatgggggt 46620  
 tcaccatgtt agccaggatg gtctcgaact cctgacctca tgatccacc accctggcct 46680  
 cccaaagtgt tgggattaca ggcacgagcc accgcgcctg gcctgggcaa gccttttcaa 46740  
 tgtctttcct aatttgtctg gagtcagttt attgcccact tctttcaagt tatttgtctg 46800  
 tacctttttg gtcacaactt ccatcatcat tgggatttgg catatctgtt ggtgctgagc 46860  
 ataagagatt gcccaagtct gattattgca tttcttagta aaacctatac aaaacagata 46920  
 actattggca atcttgacat cagcaggagc ttcctatgaa gtctgccatg ttaaccatg 46980  
 gagcatattt tgtcacagaa aagattactg aggatgtcca ggtcaaaaaa tgtgtgacca 47040  
 gttattatgg cttggatcat tctgtctgca ttcaaaagca tagaaaaggc ctgaaagctg 47100  
 atccaagacc agccatggaa gctgggtcaca tagtttttga cctggatgct ctcatgaatt 47160  
 agtctgaatt ttctaagggc agtttcatca ttatgcagat cagcaagggt catttcaaaa 47220  
 acacagttct tgaggccatc agatgcagtt ttggttcctt gagccctttt gactagtttg 47280  
 ttaccaatta aacacagctg gtgctttcac atcatatcag tcttttttag gaaatggatt 47340  
 aaccactttc ttctttgctc ccattctgcc actttttgta aggcacttgc ttttgccaac 47400  
 caccctagtg ctgcttagag tgaaggaggc tagacagttt ttaaggacca tctattgtca 47460  
 tgaacccttc ttttaattca tagtattttt gagtatgtat atttgggtgc tccattgtat 47520  
 ttgatattaa gcaaaagttg tcagaagctt ccagcattgt agaagagat atttgggtta 47580

ccctccaagt ttaggtatta agtgtacaaa aatgtgatca tctctcagat gcaataaatt 47640  
 gtccctgctg gcttacttta agtaggtatt ttctcttgct tatagttgta gggacagaat 47700  
 ctcttcggac aaacaacttt cctcataggc gttatttttt ccctttacac gaaaatgaac 47760  
 ttaagggtat ctggacatgt atattcagta cattcagaca gtaaaaggag tttgtgtgat 47820  
 atatattctg tacagcattt gggaaaacac tgtttttcta cactgccaca ccactcttga 47880  
 ccccgatgt atttttttct acactaacca gcgctctgtc tgacataagc tgggtgccct 47940  
 acaatttttg tttggacagt ttctacctgg gtttagcatt agatcttaca aggttaaggg 48000  
 ttcagtcoca caagactgcc tgtactttac ttcagatgcc agttgcaagt cctggccctc 48060  
 tgtactcttg actgactggc tataaatagg gcttctgac cctctccttag gtttgatgat 48120  
 ttgctagaat ggctcaagaa atccggaaat gctttactca ggttactgg tttcttatga 48180  
 aggggtacaac tcaggaaatat ctcaatggga gaaatgtata ggagaagga ttaggggggtg 48240  
 gggatgaggt ttggagggtc catgccctct ctgggcttat agccttccca gcaccttaat 48300  
 gtactcatcc ttggaagct catcaaatct cttgttcaag aggttttttt tttttttttt 48360  
 ttaattggag atggagtctt gctctgttgc ctaggctgga gtgcagtggc acgatctcag 48420  
 ctactgtaa cctctgcctc cggggttcaa gcaattctcc tgcctcagcc tccaagtag 48480  
 ctgggattac aggtacgcac caccacgcc agctaaagttt tgtattctta atagagatgg 48540  
 ggtttcacca tgttgaccag gctgtgtctg aactcttgac cttgtgatct gcttgccctg 48600  
 gcctccaaa gtgctgggat tacagatgtg agccactgtt gctggcccg gttttttttt 48660  
 tttgagatgg agtctcattc tattgccagg cggagtgcg gtggcatgat ctgcgctcac 48720  
 tgcaacctcc gcttgccagg ttccagcgat tctctgcct caccctcccg agtagctggg 48780  
 actacaggcg cacactocca tgcccagcta atttttgtat ttttactaga gatgggggtt 48840  
 caccatgttg gccaggatgg tcttgatata ttgacctgt gatctgcctg ccttgccctc 48900  
 ccaaagtgtt gggattacag gcgtgaggca ccgtgctagg ccaagagttt tttatagaat 48960  
 ttaatcoca ggctctcctt cctccctcat gccccattcc tggagggttag tagatggaac 49020  
 tactaacaga aagtccaat cctttaatta cttggtcttt ctgattatca gctccatcct 49080  
 gaggtgatct agagacccca cctaagtct cctcatcagc ataaattgag gtgtgttcca 49140  
 aaggggctct ttatgaataa cttgaaaata cttttattac tcaggaaatt ctgaggattt 49200  
 tggatagggg ctctgtgcta gaaatctgac aaagaccaa tgtattatta tactccttag 49260

cagaacatgt agggagaatc ctgtggtgct atgtcttaag gagaaaagct gtggatatag 49320  
 tagaaatttg gatcagagaa ggtggagcaa agatttaata tcttttattt tattctccag 49380  
 tgctaagcca tgtgtaggca gccagtaaat acttgtgggc tggatataag tctttttttc 49440  
 ctttttttgt ttaataggaa aggttgtcaa tatagatata aattcactga gatcctccat 49500  
 gaggcctggc tttgaagata taatccgaag gtgtattcag agatttttta gtctaaatga 49560  
 tgggcagtc tggctccaga aacgtcacta tcaagaaggt aaagaatttt ggggttgatt 49620  
 gttcttatca ttttattctt tagagacagg gccttgctat cttgccagg ctggactcga 49680  
 actcctggat ttaattgacc cttctgcctc agcttctgag tagccaagac tgcaggtgca 49740  
 caccaccata cctggttttg tggttgattc ttgatcttgt ttgtcattat gtttggtata 49800  
 cacatgactg tagttgtctc cttgttggtg aggggtagga aaatgatgcc tgagtgttct 49860  
 tattttacc tggtgatgat ttgtgtcag atccagtctt tccttggtatt ttagaagaatg 49920  
 tacttgaagt atatttcctc cctgtcccct cctatatata ttgttttgct tgactgtagt 49980  
 taccagtga gggatatttt cccaacagc ttactttaat ggcatgcag aaacccagct 50040  
 atatcgattc tcgttggtg atggaactat agtgactgca cagacaaaaa gcaaacctct 50100  
 ccgaatatct gtaacaaatg atcgacatgg ctttgtctca acccacttcc ttcagaggta 50160  
 atgatagatt actgtgtatt ctaatacaaa atgcagcagt gttctcaaaa tgcctttatta 50220  
 ttaaagtaaa aagggaaggg ataaaaatg acaaaattta ggaagggtat tgggtttgat 50280  
 gaaatgagtt tagattcctg gattatgata tgtttaaggt tgtattttta tgtgaaagt 50340  
 attatttatt aaatacttta caggaaagct aggtgatggg aaggctaagt ggtggataaa 50400  
 agagcacata aaatctgatt acatgtctta cactcattt ctgataatgt gtgttgcttt 50460  
 ggggactgca tttaaaattt gagggtaaac ttcaagaata aaggtagtta ctgtctgggt 50520  
 tggtagtggc aaataagaaa tgcatgaagg ggaggatatt caccatttaa ttatcttgag 50580  
 taatttgag gtacccccag gtgaagccct agataatgtg gcaactctaa taaagccac 50640  
 ctgaaactcc agttaacata gctgttggtc ttctataata ctacagtgtg ctactcata 50700  
 gattctgtgg cttactgaaa aatatgttac taggtaaata attgatcaat atgtagattg 50760  
 gaactgtcac taggtatttg aatgctgcct aaaaagttaa gttcctgggt agttaattca 50820  
 tcccatTTTT ttttccctc tcttctctc tcccttctc ctttctctc cttctctct 50880  
 tctttttttt tttttttttt tttaaacaga gacagagtct tgatctgtca ccaggcagg 50940  
 tgtgcagtag tgccatcaca gctcactgca acctcgaact cctgggctca ggcgatctc 51000



ccaccgcagc ctcctgaata gctaggacta gagatgtgtg tcoatgtgc tgcccaattt 51060  
 ttaaatTTTT tgtagagaca tgatcttgct gtgttgccca gggtggtttc aaactcctga 51120  
 gctcaagtga tctcctgcc tcagcttccc aaagtgtggt gaatataggt gttagccact 51180  
 gttagctggct ggTTTTttaa aattttattt ttttttaaat ctgattaaaa gctttcatgc 51240  
 atgcttagaa ttttttagta aaagtgtgat gtttgtttg cagagaacag aatggatata 51300  
 gaccaaacc aaatcctggt ggacaaggga ttagaccacc tatggctgga tgcaacagtt 51360  
 cggtaggcgg catgagtatg tcgccaaacc aaggcttaca gatgccgagc agcaggccct 51420  
 atggcttggc agacctagc accacagggc agatgagtgg agctaggtat gggggttcca 51480  
 gtaacatagc ttcattgacc cctgggccag gcatgcaatc accatcttcc taccagaaca 51540  
 acaactatgg gctcaacatg agtagcccc cacatgggag tctgggtctt gccccaacc 51600  
 agcagaatat catgatttct cctcgtaatc gtgggagtcc aaagatagcc tcatcagtt 51660  
 tttctcctgt tgcaggattt tgtgttgaca tttcctttta tttttttct ttttaagtaa 51720  
 ttattcttcc catactacta taattcttgt aaagttaatc tttttataa tagaaacttt 51780  
 gaagaattaa gttgtatttt gttacagtgt ctggtagtct aattcttttc ctaaaatttt 51840  
 tttcaaatc aggtgtgcac tctcccatgg catcttctgg caatactggg aaccacagct 51900  
 tttccagcag ctctctcagt gccctgcaag ccatcagtga aggtgtgggg acttcccttt 51960  
 tatctactct gctatcacca ggccccaat tggataactc tccaatatg aatattacc 52020  
 aaccaagtaa agtaagcaat caggattcca agagtctctt gggtctttat tgcgaccaa 52080  
 atccagtgga gagtccaatg tgtcagtcaa atagcagaga tcacctcagt gacaagaaa 52140  
 gtaaggagag cagtgttgag ggggcagaga atcaaagggg tcctttggaa agcaaaggtc 52200  
 ataaaaaatt actgcagtta cttacctgtt cttctgtatga ccggggctcat tctccttga 52260  
 ccaactcccc cctagattca agttgtaaag aatcttctgt tagtgtcacc agccctctg 52320  
 gagtctctc ctctacatct ggaggagtat cctctacatc caatatgcac gggtcactgt 52380  
 tacaagagaa gcaccggatt ttgcacaagt tgctgcagaa tgggaattca ccagctgagg 52440  
 tagccaagat tactgcagaa gccactggga aagacaccag cagtataact tcttgtgggg 52500  
 acggaaatgt tgtcaagcag gagcagctaa gtcttaagaa gaaggagaat aatgcacttc 52560  
 ttagatacct gctggacagc gatgatccta gtgatgcact ctctaaagaa ctacagcccc 52620  
 aagtgaagg agtgataat aaaatgagtc agtgcaccag ctccaccatt cctagctcaa 52680

gtcaagagaa agaccctaaa attaagacag agacaagtga agaggtaatt tgttttctgt 52740  
 atatttcagc tcatatttca tcatttttctg gtgttagata atgtgatata aaattctctc 52800  
 cattttagggt ttattttaaag aaagttaaatt ctttagctct catttcttta taattatttt 52860  
 ggatgtcagt aaaattatga tgtaatttag aaataacaga tgtgtatggt ttaagatgtg 52920  
 actataactc ttttagtagcc aatatgaaat tttttcatgg aggtgtttat tgctggaatg 52980  
 ggcagattgg gtcattaaga gaatggtaga agtaatcagg aaaaaaaaaa cttgtattaa 53040  
 gcagcataat ttttatttta aggtaaaatc aagtttcatg cacaagatga cattctgtat 53100  
 aagcatttcc caaacttata ggatatatta atatgcactt gagaaaaatga aaggcttaaa 53160  
 gttaggatgt gggcttaacc tactgttcac caaatttatt gaccgaagcc ctttttagag 53220  
 catgcctatg aacatcccg cttgctcctt ttattattaa tcacacttat ttcagaaagg 53280  
 tttgtgtaga tgcagatata tgttagctaa ttatcaatgc actgctagtg actgttacct 53340  
 gcaaaatatt ctacagtttg agaattaaat gtcttgtgta aatttaaaaa atgccccctt 53400  
 gaaaggacca aatgtagtga tttaacttca gaggaggaaag attagagatg ggggtcataa 53460  
 taaactggcc tttcaggtgg gtattatcat tgtaggtagt ttttgtattt tacttgcttc 53520  
 tatttcatgt atcatttttt ctgatgggta tgtttatacc tgtgtgtctg gtaatgtata 53580  
 cagggttaatt tttaaaactt tattttcagg gatctggaga cttggataat ctagatgcta 53640  
 ttcttgggta tctgactagt tctgactttt acaataattc catatctca aatggtagtc 53700  
 atctggggac taagcaacag gtgtttcaag gaactaattc tctgggtaag aatgaactag 53760  
 gttttttttt tttttgtctc ctttgaaact tttctgcata cctgtaaaca ctcttact 53820  
 aagaccagga tataaatagc atttataact tcagaacata tattctgcct ctgttttcta 53880  
 tactaattta tatgtgcttt agaaagcttt ttgaacattt tctgtttttt taaaaattaa 53940  
 ataaatttcc cacttctaac taatatgcc aataatcatg cacttataga aaaatattca 54000  
 tgtttgatta ttccagggtga gtactgtagg tactagggca tataattttc ttaggcacag 54060  
 agaactggat taaaagcaa ctcagactct agattaaaac ctgtccatg gtgttttaac 54120  
 agaactctgt catttaatta agatagtttt ctttggtgtt tgctggttct tatctagccc 54180  
 ctctctgtt gctgtgtgtt gacttcatca atttaacaaa ggtaggccgg gcattggtggc 54240  
 tcacactgt ggtcccgct actcggggagg ctaaggcatg agaactcgct gaacctggga 54300  
 ggcgaaggtt gcagtagacc aagattgctc cactgcactc cagcctgggt gacagagtga 54360  
 gactccgtct caaacaaaca gacagaaaaa caaagatata ttgtgtgtgt caattgaaaa 54420

ggcagcatgc acaattatct agaattggtca ttattcagta gcattatttc ctaactaga 54480  
 atggatagat caattaagag tgggggggaa aaaaagaagg ttagaagggg attttacatt 54540  
 ttattttctt tcatcagaa ggcaacttat ctggttaagt tgattgttaa aattataaac 54600  
 agtatactta agtacaaata tgcaagaacc ttcaggagct tggaacattt gtgaattttt 54660  
 caatattaag tgaagcgcag agtatcagtg accatatcag gctacagaaa agttctcagt 54720  
 acttcagccg acatggagat tgttggttct actttatttg gaatatgaga cccctttttg 54780  
 gctggcaggg gggcgggggg tggcggtggt gggtagggc cacttccctc acttattttg 54840  
 taaaggaaga cagtgtttgt ttttgaaga aagacattct tgggtgggga gtggtggtat 54900  
 ttgtgttttg tacttgatta tttatatatt aaatcacgaa gaaatgtttt tgtattgtgt 54960  
 ttccaacagg ttgaaaagt tcacagtcgt tgcagtcctat tgcctctcca tataaccgag 55020  
 cagtgtctct ggatagccct gtttctgttg gctcaagtc tccagtaaaa aatatcagtg 55080  
 ctttcccat gttaccaaag caaccatgt tgggtgggaa tccaagaatg atggatagtc 55140  
 agggaaatta tgggtcaagt atgggtacgt tatttctaata tagtatgtat gattattttg 55200  
 ggaaagcat atttaaaata cttaaagcca tctaataat tgggagtaaa taataacttt 55260  
 ttgaataacg ttagtatgtt tcttccatga atatccttca tttattctat gttttggtta 55320  
 tgtaaactct tcaagagtct tttggtctat gacattttcc agcctgttga atatatgaga 55380  
 atagtggcct atgtctccac agttggccag ccccttttct accatgacaa agtgctgttt 55440  
 tgtcaagggt gatgttgtgt ataattgctg tacttacatg gtataagaag gatttcatta 55500  
 taatatggaa aagacctaa gtaggtacc tgttttaggt ggcccaaacc gaaatgtgac 55560  
 tgtgactcag actccttctc caggagactg gggcttacca aactcaaagg ccggcagaat 55620  
 ggaacctatg aattcaaact ccatgggaag accaggagga gattataata cttctttacc 55680  
 cagacctgca ctgggtggtc ctattcccac attgcctctt cggtctaata gcataccagg 55740  
 tgcgagacca gtattgcaac agcagcagca gatgcttcaa atgagtaagt gtccaccctc 55800  
 cccctctcat gaaaaagaa agtttagatg ttcaggataa tttttgctct tatttgagaa 55860  
 tttgtgcttt ctttttgctc cccagggcc tgggtgaaat cccatgggaa tgggggctaa 55920  
 tccctatggc caagcagcag catctaacca actgggttcc tggcccgatg gcattgtgtc 55980  
 catggaacaa gtttctcatg gcactcaaaa taggtggggg gttattttgt gactctgtag 56040  
 aaaaatctcag cattgggtag tttagaaaa agttggagca cagaagcaaa cgtgaaagag 56100

aatgagaatt ccctataatt gaggtactgg gttgccagct gggcatttct cgtgtaactc 56160  
 tgtgtaaaaa tgaggctgaa gcagtaagca gtgcgtgtgg cattcacagg agaggggagga 56220  
 gatacaacca tgttgtccag ccattagggc cattcagtagg ccaaacctct gagagcctct 56280  
 ctgtgagatg attgtctctc tagtcccatg aggaggggaa aaaagataag tacatgtttc 56340  
 tagtggtttt ataaatgttc ttcagagggg tagcctcagt ttccagaaa attaaacttt 56400  
 tttaaaaaaa cttttctttt cccccaacca cctgctgcct attgagaaaa ttcttttaag 56460  
 gattggctaa ttgttttcta aaattatttt aaacatttca gtgatgatag tgaaataact 56520  
 atatagcatc tttaaaaatt ttcataaaat aaagattgta ggcccggtgt ggtggctcac 56580  
 gcctgtaatc ccagcacttt gggaggccga ggcgggcaga tcacaaggtc aggagatcga 56640  
 gactatcctg gtaacaagg tgaaaccct gtctctacta aaaaaaaaaa aaaaaaaaaa 56700  
 ttgaccgggt gtggtggtgt gtgcctgtag tccagctac tcaggaggct gaggaaggag 56760  
 aatggcgcta acccggtgtg cggagcttgc agtgagctga gattatgccca ctgcacccca 56820  
 gctggggcaa cagagtgaaga ctccgtctct aaaaaaaaaa aaattgttag attgtattta 56880  
 atttttattt agcttagtaa tttacttgca tgcaagaggc catgtgcaat gtcagctcta 56940  
 acaggaattc tacagtaagt taagcaagga aaataaaaat gaactgatct attgagcaga 57000  
 cagtgatgta actatatgaa tttatttgag tgcttctcta ctctatatga atttatttga 57060  
 atgcttctct actcaataga gagcaaatag tttcaagta acagaacttt tctgaggcag 57120  
 gataaatgtt taacttcctg cccttgtatg tgttgagaa ctgaggcaac ttgctgtggg 57180  
 tgatatgggt ttgtgttaca ctgccaata tgagctctgt gggccaagtg tgacaagtc 57240  
 attttggtat ttctccagac tcacgtcagt gatagctcaa catttctttt tttttttttt 57300  
 ttttttgtag acggaatctg gctctgtcgc ccaggctgga gtgcagtggt gcaatctcgg 57360  
 ctcaaggatc tcttgggctc aagcaatctg cccacctcta cctcccaaag ttctgggatt 57420  
 acaggtgtca gccaccacgc ctggctccct tctttttttt tttttttttt tttttttttt 57480  
 gagacaaagt cttgtctctc ctcccagcct ggagtgcagt ggcgcaatc cggatcactg 57540  
 caagctccgc ctctcgggtt catgccattc ccgcctcagc ctcccagcta gctgggggcta 57600  
 caggcgctca ccaccacgcc tggctgattt tttgtatttt tagtagagac ggggtttcac 57660  
 cattcacagg atggtctcga tctcctgacc tcgtgatccg ccgcctcgg cctcccaaag 57720  
 tgctgggatt acaggcttga gccactgcgc ctggccatag ctcaacattt gtatccttcc 57780  
 ttttattctt ttgatttctc taattttcaa gtattataat tattacctcc ttcactgttt 57840

ttgtgaggag tatettctcc catccttccc taccctcccc ctggccccc tttctgctat 57900  
accccaaatg cctaggggtt ggcaattaca atttggtgtt gggattgggg gtttaagctg 57960  
tatatggtgg tctaaagtgg cctggtgaaa ttcttaaatt gtgggcctta aacttaaatt 58020  
gatgccattc actctttttt accacttggt ttattatttg tgtttgtagc atttgagtta 58080  
ctgttcatta aaaatactat gcatgggtgc tgtgatctat tactcttaga aaaaaaaaa 58140  
gcaccattga cattgattgc aagtcttttt ctaggcctct tcttaggaat tccctggatg 58200  
atcttgttgg gccaccttcc aacctggaag gccagagtga cgaagagca ttattggacc 58260  
agctgcacac tcttctcagc aacacagatg ccacaggcct ggaagaaatt gacagagctt 58320  
tgggcattcc tgaacttgtc aatcaggtag gttgcattaa catggaagta ggagagtgtg 58380  
tatttgtgtg tgtgcgcgcg tacacattca tgaagccaca tacaagaatg cctgtgtgtg 58440  
tctctcctag tacttgtggt atatcactac attcatggat accagcatta aatttggaaa 58500  
atatactttt ttggtctcaa ttctgtatgtt aaaatagaaa atatacttac gattgcgata 58560  
ttactttcaa caaccacta tttttggcaa ttgtagaaat gatttagtta agctactgta 58620  
ctgttcttaa aaatgtgacc ttttattcat gttaacagtt ctcatcttta taactatctt 58680  
tctctactac ttagccaagc cgtgtgtatt ctgaggcaag cttttttttt gcttgtttgt 58740  
ttaacaaaaa cttgtttaca atggccaagc tgaacatcct aacatcatgg tgtcctgttc 58800  
ctgtttacat cccccgcctt atgaaaacat gccattcaca aatctgtatt tctgaaagac 58860  
acattctgta gtgactgttt tttctttttt gaatcgaggt ctgcctctgt caaccaggct 58920  
ggagtgcagt ggcacaattt catctcactg caacctccac ctccagggtt caagtgttc 58980  
tcctgcctta gcctcgcgag tagctgtgat tacaggcacc cgccaccacg cccgggtaat 59040  
ttcttttgta ttttttagtag agatgagatt ttgccatgtt ggccaggctg gtctcaaaact 59100  
tctgacctca agtgatccac tcgccttggc ctcccaaagt gctgggatta caggcgtgag 59160  
ccaccgtgcc cagccatgac tgtttttatt taaaggctat ggaggggcca ctgtataggt 59220  
ttgtgcgttc aacagtaagc aggaagatc atcaggggct gtcagttgtt gttggggaaa 59280  
tagatgtgta catatggaag tacactgcca tgtggcaaat gctgtcacag tgcagatggg 59340  
aaacgctgag cagtccttgt gtacacctc agggatacca gtgacataga accttggcac 59400  
tgaggagcca tatttttata tccaacagaa gtatagaagt tcttttttat ttctttactt 59460  
gttcaggcac actaaataac ccatcaatto ctctctccc tcctgtagtt ctctctgttt 59520

tactgtgtcc ttgtgaggca agtctagaaa ttaataattg tcactattcc cctgtgttgg 59580  
 actcctagta tectgaatct caaatcgctt tctgtcttga ttactcctt tgttttgctg 59640  
 caacacaact tctattaact tcttcatccc tactgcatga aataaaatgt tttgggttct 59700  
 atgtgtctga aaatatcttt attccaccct cctacatgtc tggctatgta ttacattcta 59760  
 ggtttaaaa aattatatac ttttgaaaga tttctgccat agttttctgg catctagtgt 59820  
 ggccactgag ttgtatttct ttctgatttt gattcatttg catgtgacct gtttattctc 59880  
 tttggaatga tttaggaact ttttctctcc gaaattttat gatgtgtgat cttgggtatg 59940  
 gtcttttttc attcattctg ctgtgtacta gatacactga tattcccttt ggttttaggg 60000  
 tgttttcttg tataatttct ttattaacct tatctctcct gtgttttttt ttctgacctc 60060  
 cttttctggg atttctgttg acatgttggg cattaaattc gttctatttt tttttttttg 60120  
 agacggagtc tcgtctctgc gcccaggctg gagtgcatg gcgtgatctt ggtcactgc 60180  
 aagctccacc tctgggttc aagccattct cctgcctcag cctcccgagt agctgggact 60240  
 acagggtgcc gccaccacac ctggctaatt ttttgtattt ttagtagaga cggggtttca 60300  
 ccgtgttagc gaggatgttc tcgatccct gacctcatga tccaccacc tcagcctccc 60360  
 aaagtgggat tacaggctgg gattacaggc gtgagccacc gcgcctggcc cttcattcta 60420  
 ttttttgaag tcttctctat ttttcttgtc ttgtatttgc ttgagtcacg ttcaagcttg 60480  
 gaaagtgttg gacgctttta tcaagtatct ggtgatecct gactgttctt atatgttaag 60540  
 agtgagacat taagaagctg atttgacact ttgcaagtgt gaggcagcac agttgtcttt 60600  
 actgagggta attaagtggg gaactagccc tagccctttt atttcaggac tccccaatt 60660  
 tttatttatt ttttttgag acggagtctc tccctatcgc ccaggctgga gtgcagaagc 60720  
 gtgatctcgg ctactgcaa cctccacctc ctgtgttcaa gcgattctcc tgccctcaacc 60780  
 tcttgagtag ctgggactac aggcgcacgc caccacgcc ggcttttttt tgtattttta 60840  
 gtaaagacgg ggtttcacca tattggccag gctgggtctg aactcctgac ctctgatcc 60900  
 acctgcctcg gcctcccaaa gtgctgagat tacagggtg agccaccgcg cctggccagg 60960  
 actcccaaaa ttccacatg tagagtgttt ttcaaccacc actaccactc ctgccatctg 61020  
 gtaatctttt attacctggt tgcattttgg gagctgggct agggaggcaa gtgtgggata 61080  
 ttaaattata aaatataaaa tttattttaa attataaata tgctaaatat aaaatttctt 61140  
 gttttcagcc tctgcctcac tcctttctta ggctctgctt ggtgccctg aacccctgta 61200  
 cctttgtcgg gtaggtagaa ggtacaggcc tttcgggagt cagggagcac gcaggagggt 61260

agttgacctc ctgctctata ctgagactcc taaccaacct cctcatttca gcaccatgct 61320  
 ctgatccccc accaccctca ctggagctcc aatagatctg tggaaatacat ttgcttggtt 61380  
 ttcataatgta ttttctctct gtgggcacat aagtctaagt tttctgttc ttgtgagctg 61440  
 gttcctactt ctctattcac tttgtatctt ctattataaa tatggaataa cttgatcttg 61500  
 ttgcgttatt agtgttttat ggataaatac taccttttaa gtattttttt ttaataataa 61560  
 ctggatacct cttagtctcc tttattgtca ttttagtagg gttagcaagt gaatgcagg 61620  
 aagcatgcat gatcagctcg ccatgtttaa cttaaagtat agtttgcttt attaagacat 61680  
 ctccagccag gcatgatggt gtgtgcctgt agtcccagct actggggagg ctgagggtgg 61740  
 aggatcacat gaacccaagt tgatgggaca aaatagaaac atagtttcca gttactatgg 61800  
 taacagtcca agaggtgtcc tgggaagggt cataagggtg aaatggaaag aaggggagga 61860  
 tacatgatat gcctggagg aaaaattgac aggacttggt ggtcacacgt gtttactctt 61920  
 ggaaaggag aatgtgaaga atcaaattgc tgggttttgg ttctgggca gtgaatgggt 61980  
 atgctgtgta cgtcaccat ttgacatctg tgagggttg gtttcaggac cctgtggat 62040  
 accaaaatcc atggatgctc aagtcctta tataaacag tctagtattt gcatatagcc 62100  
 tatgcacata ctccacata gtttaaatca gctctacatt acttataata cctaatacaa 62160  
 tgtaaatgtt atgtatatta tatagttgtt acactgtatt gtttagggaa ttattataag 62220  
 aagaatgatg actgtgtgta ttcagtcagg tacagctacc gtttctctcc cctggaatgt 62280  
 tttcagtcct ctgttggtg aatccatgag tgtggaacca tggatatgga gggccaactg 62340  
 tattgtgata tagtagggtg ggttgaggga gaacaagcct gcttgggggg aagggtctgt 62400  
 gggaatcatg gtgtctgttt tctgcctgtt aagtttgaga tacctgagac atcagggtgc 62460  
 ggatgttaag taggcatttc cataacaaa accaaaagtt cagagatgtt ttggctggag 62520  
 acaaaaatgt gatcattatc accagcggat gagagcacct aagtagaaaa tatatcaaga 62580  
 gaaaataaga gagcctagga ctgaaccctg atgaacagtt agcattcatt caaggaaaag 62640  
 ccagagagat gggagaaaaa tgagaagtgt tgcgaagtac agtgggtgta agtatgcttc 62700  
 aagagagaca tgtcaagcat gctggctgca tgcctggcat tcagtgcctg tggatgagaa 62760  
 aataaagggt aatgcacagt acacctgggt cttgtcttag cacagcaggt tgttctcttc 62820  
 ttcagaatat caacttttac ttctttttct gtcacctgtg ggtgttatt ttgaatgtat 62880  
 ccttagcatg tagagaagtg atgctggca cataacaagc atttacttaa atacttgtg 62940

aatgactgga tgttttttgc actttcttta gagcatttga cttctgttgc tttcatagat 63000  
 gttcttcaact gttcttttat gtgttgtgtt taaggagacag gcatttagagc ccaaacagga 63060  
 tgctttccaa ggccaagaag cagcagtaat gatggatcag aaggcaggat tatatggaca 63120  
 gacataccca gcacaggggc ctccaatgca aggaggcttt catcttcagg gacaatcacc 63180  
 atcttttaac tctatgatga atcagatgaa ccagcaaggc aattttcttc tccaaggaat 63240  
 gcaccacga gccaacatca tgagaccccg gacaaacacc cccaagcaac ttagaatgca 63300  
 gcttcacgag aggtgcagg gccagcagg aaccagtcac gtgttcttcc ctctgggttc 63360  
 tccttctgtt gtttccagac tatgtttctc agtgttctta ccactggtgc aatctatccc 63420  
 tgtcaactaa agaaattctt tttgttttac tctctgtgtaa ggttttatct gtacaaatgg 63480  
 ctccttgtaa aggagtagtt ttatgagaat attctatctt acaggtaaaa agtaaaaaaa 63540  
 tgtcaggaag gattgctctt ggggaagaaa aatgttactt gatgactttg tagtcttaaa 63600  
 ggtagataag gttttttttg aaaaaaatcc ttactgctaa taaccaaata cttaaacctt 63660  
 ctgatttca gcatttttaa tggaactctt cttcttagat gttttataaa actagagttg 63720  
 tcttttaata ttctaaaata tgacttctgt ttaccctatt gtttcttag tccccaagaa 63780  
 atgttttaaa attcaattgt ttttattgtt tatgtcttca aaccatataa gtatagtaat 63840  
 gctcgagggt ttttttttgt ttgtttgttt gttttgtttt gttttttttt ttttgagggtg 63900  
 gagtcctgct ctgtcgccca ggctggagtg cagtggcatg atcttggtct actgcaacct 63960  
 ccacctctg ggttcagggt attctcatgc ctacgctcc cgagtagctg gggagccacg 64020  
 caagccggc tagtttttgt atttttagta gagacagggt ttccacctgt tggccaggcc 64080  
 cgtcttgaa cctcgacctc aggtgatcct cctgccttga ccttccaaag tgctgggatt 64140  
 acagggtgta gccaccgtgt gcggccaaat gcctgagttt ggaatccaaa gagccagaga 64200  
 ctccattgca taaatattgt taaaagtcag tttaggtagt cagaaaagct gtgttactgt 64260  
 attcatttta ctttctgcgc tttcttcaact aaaagtcatt tagggaagac taatggagtt 64320  
 tattcagaat tctctgtatc aacttaaggg tatttcccca tgtgccgaa taatcccaga 64380  
 gaaagcctga ctataaatct tttgagtttc tattgtgtgt gtgtatata atataaaatt 64440  
 tatttattta ttattatttt ttctgataca gggtttcagg atggaatgca gtggtgcagt 64500  
 cacagccac tgacgcctcg acctcccagg ctcaggtgat cattccacct cagcctccca 64560  
 ggtagctggg actacaggag tgtgccacca ctcttggtta attttttgta gagatgggg 64620  
 ttcttcatgt tgcccagact gatctcagac tcttgggctc aagtgatctg cccacctcag 64680



cctctcaaa tgctgggatt acaggtgtga agatattctt taagctgcaa aattgcactt 64740  
 tacttttttt tccccagtg caaacagtag cccatcatat gctagccaaa gacttttcaa 64800  
 cattgacctt ttgacagtgt gaaagtactg gttcagttta gacgtgactt agccagggtta 64860  
 ttgtgttttg agatattacc tcattggctg gtgctgaggg tctggaaagc tgttttggca 64920  
 gactgacgtg ctctgcttgc attctaacca acttgtctca cctcagtttt tgaatcagag 64980  
 ccgacaggca ctggaattga aaatggaaaa ccctactgct ggtgggtgctg cggtgatgag 65040  
 gcctatgatg cagccccagg tgagctccca ggtgaggatg ataagccctc ccacatgcac 65100  
 tgctctgtgc tcaggacagg gcttggcctg tggttggctc tcagtaaatg tttgttaaac 65160  
 aaatgaaggt aattctgaat ttcttgtgta agaaagcagt cgcattaaag actttcgact 65220  
 cttccattct tctctctggc tggtgactgg gaggaatcag aggagggaga gctttcttca 65280  
 ttaaaacctc cgattagtgt ttttttaatt ggttcccttt gtgatcagtt gctgtactgt 65340  
 gagaacagct atcacttggc tgtttaggaa ttaataaat ctgtaaatgt tcctctgttc 65400  
 ctggattatg aaacaacatg cacactgggt aaaattctga aattataaag aagaaaataa 65460  
 agaatacata atcctgttct cagtgatagc ctctgagatg acctgtttct ttagtaggaa 65520  
 ggggatatta aaattccctt ctacttccag ccagtgggtg agacagtatt gaggggtttt 65580  
 tttaatgtgc atgaggcaga tgaccacaca gcaatcctct attgtgattt gaaatatcgt 65640  
 ttataattgt ttttttaaaa gcaactgtga aatgtctgat ttttattgtc ttagtccctac 65700  
 ttggaagtac tgatatattac attttcttga taataaaaca tcttgtggaa gctgagctag 65760  
 aatgtcctac agaaagatga taaaagcttg ctttttggag atgaccctga gctagtagag 65820  
 ctgaaatcag ctctccttgt gtacttcagt tatgtcacct tctgaacctc cagatagctt 65880  
 ctgcttgccc cttacctctt tctgaaagtt taaagaaagt tcaagatttt ctgagggtga 65940  
 cccctgctta tctgagtata acccactctt attttttttg gcttcagttt tcagccctcc 66000  
 accaccocaa cacactgaat cctcatttct ctgtaattgt ctttoatagt tcctgaaaaa 66060  
 tttgtcctca gattccacco ctaaagtgtt tcttactttg tggaaatgtt ctagtcatgt 66120  
 taaagcttga cagtgtgttg tcttttgtct ttttaaccca aataatttct aggtccctct 66180  
 tcttcagttc tcctccctcc ccttgcacat agccagaaag cttttttttt ttttttttga 66240  
 gagtcaactg tgcccaggct ggagtacagt ggcacgatct cggctcactg cagcgtcaat 66300  
 tcctcgggtt taagggtatt tcctgcctca gcctcctgag tagctgggat tacaggtgct 66360

catcaccaag gctggctagt tttggtattt ttagtagaga cagggtttca ccattttggc 66420  
caggctggtc tcgaactcct gacctcaagt gatccgccca ccttggcctc ccaaagtgct 66480  
gggattacag gcgtaagcca ctgcaccagg tcagaaagct tttatgtgaa gaattgtatg 66540  
ttttggccgg cacagtggct cacacctgta atttaagcac ttctgggaggc cgaggtgggc 66600  
ggatcacctg aggttaggag tttgagacca gcctggctaa catggtgaag cactatctct 66660  
actaaaaata caaaaattag ccagagtggg ggtgcacgcc tgtaatccca gctacttggg 66720  
aggctgaggc agaagactca cttgaacctg ggagacgaag gttgctgtga ggcgagattg 66780  
tgccactgcg ctccagcctg ggcgacagag tgagaccctg ttaaaaaaaa gaaggccctg 66840  
gggtgtttct gtcttatacc tgggtgtattg tgggggtact atatgtatgc aactggcagg 66900  
ttcttgcctat atatatgtaa ttgcactctt tcttgggtat tagcaggggtt ttcttaatgc 66960  
tcaaatgggc gcccaacgca gcagagagct gctaagtcac cacttccgac aacagaggggt 67020  
ggctatgatg atgcagcagc agcagcagca gcaacagcag cagcagcagc agcagcagca 67080  
gcaacagcaa cagcaacagc aacagcagca acagcagcaa acccaggcct tcagcccacc 67140  
tcctaagtgt actgcttccc ccagcatgga tgggcttttg gcaggaccca caatgccaca 67200  
agctctccg caacagtttc catatcaacc aaattatggg aaatctgaca atgaaaaatgt 67260  
gccttcccca agttaacatt actaaggaca taagcttcat tacatttatt gcacatgaaa 67320  
gacaaaaaca cgattcactc cctctttact tcacaaggaa aaccaaatta atttaaatag 67380  
ttggaaaaca aaaatgctgc agcacacagg taattgagag aggtgtatcc tgtcatagtt 67440  
gaatattttt ttcagtccca ctcatataaga gtccccaac tctggaagaa acactgcaaa 67500  
gttgctccct tgccccttct tgtatgttcc agtatagtag aactctctaa tctctgaatg 67560  
cttggtcaag tcagtgagag gaatgcactt tgtgggcttt taagttgatt ttcttgggtga 67620  
cttgatttta ttattttttt tttgagatgg gggcttggct ctgtcaccca ggttgagatg 67680  
cagtgggtcg atcttggctc actgcaacct ctgcctcccg ggttcaaagt attctcctgc 67740  
ctcagccctg agtagctggg actacagggt cattccacca ccccggctg tttttttttt 67800  
taaattttta atagagacgg ggtttcactg tggtagccag gatgggtctg atctcctgac 67860  
ctcgtgatct gcctgcacg gcctcccaaa gtgctgggat tacaggcgtg agtcaccggtg 67920  
cccggccctg gatttattat tacagtgatg cagatacctc ttcatctcag cctttgagag 67980  
gttcaggaa catggtggga ataaaggtgt ctattgggga gccctgtcat ctgaggatta 68040  
taactccctt gccctttaa gaaggatgga gtgatgtgag ttgagtata cgaggtccct 68100

ttcttacagg aaaccatta aagcaactga tctttcagtg atccagatgg tgctccttcc 68160  
 tgtagtaagc ctgttactct agtcgtcatc ttggtgagaa tctagaatac ctggggggggc 68220  
 agcatcttat agcactctgt atcttacact tatcacttcc ctccaccccc acctccttta 68280  
 aaaaaaaaaa aaaattacta cagaaatctg atattctaag gagaaggcat ttgggcattt 68340  
 ttatttcttc tgttttattt ttgtaaggaa tgggacaaca accagatcca gccttttggtc 68400  
 gagtgtctag tcttccaat gcaatgatgt cgtcaagaat gggtccctcc cagaatccca 68460  
 tgatgcaaca cccgcaggct gcattccatc atcagtcctc agaaatgaag ggctggccat 68520  
 caggaaattt ggccaggaac aggtaaagaa cagtgaacta taaagttagt cacatcctag 68580  
 tcccagaagt ccaagaactt aatgtatttt tcagtcaagc ctttttggat ggagagggtg 68640  
 aaaggactgg gtcatatta gaagggtgtg tttggcttgt ccatttttag agtccttcaa 68700  
 gcacgcacat atctattagg gtgtctagta cagaagctg tgaaaaatgg atcacaggct 68760  
 gtcaggggat tttctctaac attcccagct taagtatagc aatgtttgac acaattgtag 68820  
 taatttctgt gggcatgccc tttgtcgcta aagtgaactc cagaggtaat attaccattt 68880  
 gtttacttac agtccttttt cccagcagca gtttgcccac caggggaatc ctgcagtgtg 68940  
 tagtatgggt cacatgaatg gcagcagtggt tcacatggga cagatgaaca tgaaccccat 69000  
 gcccatgtct ggcattgccta tgggtcctga tcaggtagtg gatcgattcc ttaccttttt 69060  
 caaaaagttt ttcttgttct ctggatagaa ctaaagccta ggctataatc agaattgtct 69120  
 aggtatattt taacttgaat gtataactta aaatatagta attgaaaaaa cttggtttga 69180  
 aggcattggg ccattagata cttttgttaa gccagagctg cattgtgaaga tgggatctca 69240  
 ggaacctgaa tcaactcagc agagctgcac tgtaagccat gaatgtggac atgggtattt 69300  
 ttttgttgtg caaagcatgt gttttactca tttttttttt tttttttttt ttctgtgttg 69360  
 ctgacagaaa tactgtgtac atctctgcac caggacctct taaggaaacc actgtacaaa 69420  
 tgactactga ctaggattat tgggaaggaa tcattgttcc aggcattccat cttggaagaa 69480  
 aggaccagct ttgagctcca tcaagggtat ttaagtgtat gtcatttgag caggactgga 69540  
 ttttaagccg aagggaata tctacgtgtt tttccccct ccttctgtct tgtatcatgg 69600  
 tgttcaaac agaaatgttt tttggcatc cactcctag ggtatataatt ctggagacat 69660  
 ggagtgttac tgatcataaa acttttgtgt cacttttttc tgccttgcta gccaaaatct 69720  
 cttaaatata cgtagggtgg ccagagaaca ttggaagaat caagagagat tagaatatct 69780

ggtttctcta gttgcagtat tggacaaaga gcatagtccc agccttcagg tgtagtagtt 69840  
 ctgtgttgac ccttttgcca gtggaattgg tgattctgaa ttgtccttta ctaatgggtg 69900  
 tgagttgtct tgctccattt atttgcctta ggctttctcc taatgaagggt ttctatttgc 69960  
 cattcatgtc ctgtaatact tcacctccag gaactgtcat ggatgtccaa atggctttgc 70020  
 agaaaggaaa tgagatgaca gtatttaate gcagcagtag caaacttttc acatgctaata 70080  
 gtgcagctga gtgcacttta tttaaaaaga atggataaat gcaatattct tgaggctctg 70140  
 agggaaatgt gaaacacatt cctgggtttt gcctacactt acgtgttaga caagaactat 70200  
 gatttttttt tttaaagtac tgggtgtcacc ctttgccat atggttagagc aataatgctt 70260  
 tttaaaaata aacttctgaa aacccaaggc cagggtactgc attctgaatc agaactctgc 70320  
 agtgttttct tgaatagatt tttttgtaaa tatgaccttt aagatattgt attatgtaaa 70380  
 atatgtatat accttttttt gtagggtcaca acaactcatt ttacagagt ttgtgaagct 70440  
 aaatatttaa cattgttgat ttcagtaagc tgtgtggtga ggctaccagt ggaagagaca 70500  
 tcccttgact ttgtggcct gggggagggg tagtgctcca cagcttttcc tccccacc 70560  
 cccagcctta gatgcctgc tcttttcaat ctcttaatct aaatgctttt taaagagatt 70620  
 atttgttag atgtaggcat tttaatTTTT taaaaattcc tctaccagaa ctaagcactt 70680  
 tgttaatttg gggggaaaaga atagatatgg ggaataaac ttaaaaaaaa atcaggaatt 70740  
 taaaaaaacg agcaatttga agagaatctt ttggatttta agcagtcga aataatagca 70800  
 attcatgggc tgtgtgtgtg tgtgtatgtg tgtgtgtgtg tgtgtatgtt taattatgtt 70860  
 accttttcat cccctttagg agcgttttca gattttgggt gctaagacct gaatccata 70920  
 ttgagatctc gagtagaatc cttggtgtgg tttctgggtg ctgctcagct gtcccccat 70980  
 tctactaatg tgatgcttct attatgtccc tgtggattag aatagtgta gttatttctt 71040  
 aagtaactca gtaccagaa cagccagttt tactgtgatt cagagccaca gtctaactga 71100  
 gcacctttta aacccctccc tcttctgccc cctaccactt ttctgtgtgt gctctctttt 71160  
 gacacctgtt ttagttagtt gggaggaagg gaaaaatcaa gtttaattcc ctttatctgg 71220  
 gtttaattcat ttggttcaaa tagttgacgg aattgggttt ctgaatgtct gtgaatttca 71280  
 gaggtctctg ctgaccttgg tatcatttct tagcaataac tgagagccag ttaattttaa 71340  
 gaatttcaca catttagcca atctttctag atgtctctga aggtaaagtc atttaatatc 71400  
 tttgatatgc ttacagagtaa gtgaatcctg attatttcca gaccaccac cagagtggat 71460  
 cttattttca aagcagtata gacaattatg agtttgcctt cttccctta ccaagttaa 71520

aatatatcta agaaagattg taaatccgaa aacttccatt gtagtggcct gtgcttttca	71580
gtagtatac tctcctgttt ggagacagag gaagaaccag gtcagtctgt ctctttttca	71640
gtccaattgt atctgaccct tctttaagtt atgtgtgtgg ggagaaatag aatgggtgctc	71700
ttatctttct tgactttaaa aaaattatta aaacaaaaa aaaaataaat ttttttgcaa	71760
tcctttctc agacotggct ccaggctaac tgggaaggcag cactcccttt tttatatagt	71820
agaaaaatga agtttattat aagtttttat attttctact tgttcatttg gtgcaaacctc	71880
aagattttct ttaatagggt cagtccttga gataatttgt ttttacctgt attgcccttt	71940
atctttttta ggtaattctt tgtactcctg ctgtctacct ctctcacac ccagcacc	72000
cccattttt caaaccttgg tatctgttgg gtgaacagta taatcttttc atctgctttt	72060
agaatgtggg atatttccag tacctacttt ttttttttt ttttgcgtga tccaagata	72120
tataataaa atatatatat ttataaaga tcagaatgat ataaaggaga tacatgtttc	72180
ttcctttaaa aaataaacgg aagttacatt gttaatgttc atattatgat gccacttttc	72240
taaacgtcat ctggattgaa aggtgtaaat atcaataaca gtgctactta gttatcagta	72300
tttaatatct gaggtgagtt gggggtatct atattagggg taggggtatta cagaagataa	72360
ttggcttgat gtcctagaag ttctttgatc cagagggtggg tgcagctgaa agtaaacaga	72420
atggattgcc agttacatgt atgcctgcc agttcccttt ttatttgcag aagctgtgag	72480
ttttgttcac aattagggtc ctaggagcaa aacctcaagg attgatttat tgttttcaac	72540
tccaaggcac actgttaata aacgagcagg gtgttttttc tcttcttttc taatatatgg	72600
agtttcgaag aataaaatat gagagcaata tttaatttct caggaattga cttatactct	72660
tgagaatgaa ttcagtttca atcaagttta cattatgttg cttaaaaaaa tagaaattat	72720
tctttatctt gcaagaagt gaaaccacat gaaatgactt atgggggatg gtgagctgtg	72780
actgctttgc tgaccatttt ggatgtcatt gtaataaag gtttctattt aaaattggag	72840
cctaagagtg tttttttttt ttttttttt tttaaatccc tgttgggtta agggtaagg	72900
aggttaagga agcctatttc aaataatggt aacagtttct gagaagtaa aaacgccac	72960
tagggagttg ctaggagacc ttggcctgtt tggggcattg aaacaaatgt ggggtgcttt	73020
agggattatc tccgtcatct gttaaatgag aaatgggttg gactgggtat tgatagttga	73080
aatctgtcaa ctactgtgat cagggttagc tacctgatac acaagaagg gttggccaag	73140
gcgaatttct ttgcaattga ttaatacttt tttaaaaaat gaagtaccaa agctgggtata	73200

ctatgagact tacctgtagt cccttgaagt atggtagact ttttagtcaa tctacaacca 73260  
 tctactcccc ttttaagaaa atcttctaaa cccaaggcat tttcttccaa aaagatgttg 73320  
 actggtagta tcttgaatac tttaaaaaaa cagacacacc aaaaaactcc caagaaatgg 73380  
 ccttttaciaa aatgtcaaag gttcttcata ccaactgctg gtcattggct ggggttttga 73440  
 acactgtatg acaatactta aactacaaaa ttttttttac aaatacagtt tcatcaaaac 73500  
 ttgggacata catcaacttc atttcttttc agtaccttaa aaaaaaaca tcagtctctg 73560  
 gacatacaaa agaaatacta ggagaaatgg tatctggaca ggaacagaaa tgtccacaac 73620  
 tgcgagggat tttcttttac actggccaca gagcgtttat tgacaccacc actcctgaaa 73680  
 attgggattt ctatttaggt tcccataaaa gtccccatgt tgattacatg taaatagtca 73740  
 catatatata atgaaggcag tttcttcaga ggcaaccagg gtttatagtg ctaggtaaatt 73800  
 gtcattctct ttgtgtact gactcattgt caaacgtctc tgactgttt tcagcctctc 73860  
 cactgtgcct ctgtctctgt tcttagttcc ttctttgtga caaaccaaaa gaataagagg 73920  
 atttagaaca ggactgcttt tcccctatga tttaaaatt ccaatgactt tcgcctcttg 73980  
 gagaaatttc caaggaatc tctctcgctc gctctctccg ttttctcttg tgagcttctg 74040  
 ggggagggtt agtgggtgact ttttgatacg aaaaaatgca ttttgtcgag ctggtgagggt 74100  
 ataatccaaa gcaaaagcag gggcaaaaat ggacttctg aagttatctc tgctcctgct 74160  
 ggttatctc cagaatctgt catgttgact gagagtgcgt gcttgccttc tcaggcctcc 74220  
 tggccaatac cacaggctcg ctggaaatca cccacatggt ttttcattgc ctgtgcagtc 74280  
 aggtgatgcc tetatgtttt tggagggtcca cctctgttgt ttcttaacct tcccagcctt 74340  
 cccacagttg tcccctaag aacaaaacaa actcatctta gcacttagct atcatggtct 74400  
 ttatcatgac ttcttaatcg gtcctatagc tgagggaagct ttgcttcaag gctgctgaga 74460  
 atgaatattt ctaggttact tagaacggga ttgccaccac ctagtccact caattttttg 74520  
 ttacttata cacccaatgc ctggcaagga tggcatttaa ggaatctggac agaatagtgg 74580  
 ctaaggagat tgtgatatgt aaagattctg taccttaatt ctagaagcac cgaagaaagg 74640  
 cttagggtgac ctgttactaa tgtcctatta agccacaca ggttttatg catataaagg 74700  
 aagaatgag tagaccagag gttgcaagt gcaagttcacc aaggcgata atttggccac 74760  
 atggttaact taatgtcaaa ttgatgata atgataaaga attctcacac atacttgcat 74820  
 ttttgattt ggtagacgaa tgagaaaatc tggcgaacct cagcccatc ctgcaggagg 74880  
 caaactggcc tgctcccttt agaatagagg tgaactttac aggttgccag tctcttagtc 74940

cctgtcagcc tccaatggca ctggagttag agttttagc atgggctttt tggaaacct 75000  
ttaatgagcc catcctacta ctgatgttgt atatcagtta gcacttttg agccacagcc 75060  
ttcaagatgc ctgcaattt gtaatattta aatgcttctc aacctctaag taatagctca 75120  
agtttaccaa gcacagatta tagcgagaac agcagtgtac tggacaagcg attaatctaa 75180  
aacatgaaat ggattcaagt gttttcttag ggaagatgt gcattagtac ttccccccca 75240  
ccctcatcat gagaacaaac aaaggttggt atgtaagaaa tggcatgcaa atagaatagc 75300  
attggcaaaa tgaagcggtc agaaccagat ttctatttgt aagctgggtc ctcaactcac 75360  
agtgtattgg aagaaggtct ctctatttct ggcactttc gacgtgaaa ctgcctaagt 75420  
ttcaagatgt caaaggagaa tgaatgttaa ccatcaccaa gaaagaaaaa gtcccaaaag 75480  
aactatacaa agaaggtctc ctagggtgaca cctatcttgg gtgggtgacg ctggtctcgg 75540  
gcagaccaga gggaagggca gtttctcaag ataacaggtg cagactcaca gagatgagac 75600  
tgaaggatgg gccaagatag gagaactttg tttaggcttt aataataaaa cgaataacct 75660  
gtattgtcta tagcttctc catctttaag tcttaaatga aggagaaatg aaaaacaaaa 75720  
caggagcaga tagtttaggc aaaacaacc caacacacca gaaaaccatc ttatgctttt 75780  
ttgtcacaat cccatgatgc tgatagtgtt ccctactcag agtagactga attatgaggg 75840  
gtagactgaa ttatgagggg aacctgccct aagtctccta gatagccttg tagattgcct 75900  
aaaaatccagt gtcaccatga tcagtttcag gacctgatg gcttcattca gcgtgacct 75960  
tagttatggt gaggggagta gatgcaggca tgaacatctg tgctccagag gacagaaagc 76020  
caagagccct gaccaagtc agggaggagt tcccccttgg gctctgggga agttttcccg 76080  
aggatgtggc aggatcaagt gcgtgggctc cggggtcagc ccaccttggt caccttactc 76140  
ctccataaaa tgaggataag attcacctca agcttatca gctaacacat gtaaaatgct 76200  
cagcacagag cctggcacac agtgactaat atgtcattgc actttgatca caagagtagc 76260  
agcacttgag tggcagagat taggaagcta ctagtgaaaa ttctgatcat atcaggctcc 76320  
tgaccagaag tattagtga acatcttggg taaacacatt agctcttccc tcttcataac 76380  
tagagccgac ggtagcgtct gaattcctcc taagctgtgt agccatttcc ctgacatgaa 76440  
ctctaggcat cctcctagac acagtccctt cccaaggga ccttaataac caaaggtttt 76500  
ttttaggcca ctctctctca ctagtaagtg aacttcattt ttcttttagc tttgttttct 76560  
ttttttaata tatttttttt attttttag agtgggcgac agctctgtct cccaggctgg 76620

agtgcagtggtg tgctatcata gctcactgta accttgaact cctgggctca agtctctctcc 76680  
 cacctcagcc ttccaagacc ctggaatcat aggcgatgagc aacctgcct gtttagcttt 76740  
 ttctcatctta aaatatctat ctggttgga tctaaactt aaaactgcag attttgtcct 76800  
 gtcccaaaa aaactcagga ttacctggg actcctaate cgcacctcc catcaccatg 76860  
 ttgtctgggg gcttcaccac ctgaatctga aatccatcat ctttactgct cccacctcta 76920  
 gtccaagcca ccaccatttc tccctggata actgggcat cttcgtctgt ttctcccata 76980  
 aagtcccat ctccacntag caaatgtcgg tgcccagggt aaaacctcc attgcttcc 77040  
 tgatacaca caaatgaaat ctaaactcta ccgtggccta ggaagcccca cacagggtgg 77100  
 cccgatgcc tcccgccact ctccactggc ctgagttgtg ttggtctcac cccctgagct 77160  
 gctttctgct cctcacactt taagcttcc ggagcgccag cctccacgt tttctcagtg 77220  
 gtctgattga tctactttt caggactcag ttcagaggtc tgacctggt tttatttagc 77280  
 agtgccctc cccagtcaca ctggattcta ccatccagtt ttacccttc catacaagca 77340  
 agaggcctcc tgctgtggac tgctcttctt aggacaacac tggctccaca caagtcagcg 77400  
 aggatgggg catcttttag caacatggtt tcagggtgaa gttctcagga agtgtttgtt 77460  
 gaatgcatga tgggacaaaa gggaggacaa tgaaatgaga cggaattccg tgtgtttctt 77520  
 gggcagttgg tgcagggtgt cctctctcag gaatcacagc ttgttaaagg tcatctgctt 77580  
 gctatggaca ggggctccca tgactcgtct ggaactgtat cacctccca agcctgggtga 77640  
 tttcaggctc attctgggg tagacaccac ctctcagtc ccttcttttg gttaccctgc 77700  
 tgtccaaagg cccacagttg ggggtccctac tcaccaggt ccatgtttcg agtccggggg 77760  
 ttactactgct tgtaacctt gcagctcctc agctccatga gctgtacgtg tagctggttg 77820  
 aggacatccc tgtccagtg gtctcactgca ttcacagct ggttgcaaaa aaggtagtct 77880  
 gtcaacaagg taagtacagg gactctcgcc ctgcccttct accaaccagg ggacatattt 77940  
 caggcagggt gcgggtggaa ggtgctaggg gctggtgacc tgtttactcc aacttctgca 78000  
 agagccagcg tttggaagag ttagggtgact ttttggttc aagtcaccac aggttcactc 78060  
 ttcatgagag tgaaaaacta ggagaataaa aaccagctct gtgtatttaa cgttggagtt 78120  
 ctgcagccac tggtcaggaa acttcccaag cttgaaaga aagccttcca agtcttggtt 78180  
 ttatcagcag ctttatttca ggggccctca gctcctctg attgcaaac agccatttga 78240  
 tgaaaggacg ggtaagtggc ctgggttctt gtgtagtctg ggagctaccg gtgagggact 78300  
 taacctacc ctttggtaaa gtatgagggt gaacctatct aaggagaaag actgcacacc 78360



tatatagtaa ttaaagcatt tgtgctgctg acatttaaac atcagatttc atttaaatta 78420  
 tttcaggctt ttcttgaag gtcaaagcct gggcaatacc aaggccacag tacaggaaaag 78480  
 ctctagtgtc ggagctcagt agtgactgtc cctgtacaag gggccacatg ttccgatgac 78540  
 cagacatgcc actgtctcct ttggtcttgt gtggtcctgg gccacttcag tcgcatgtgt 78600  
 gtttagatgg ctactgtac ggaagcactt agcagagtgc ttggtgcagt gtgttactgt 78660  
 tataattagc gcgcgggtccg tgtaggccct gcagtgggtg atatttggct tgatcttaca 78720  
 gcctgacagt gttaggagtc ttcacaagtt ccggcaaac ctggttgcct gctgcatgtt 78780  
 aagttagagg gaagaagcca tatatattac acacgcaggg tgatggaggc aaaagcagg 78840  
 gtgatggagg caaaaaaggc tgattgaaca cagaaccccc aatctcagca gcttcacaac 78900  
 ttactcccac cggctcaggg actcagtggg acttggaaca ttgtcatca ctccctcgag 78960  
 gttggggggg gcctacctgg cagcactggt gtaccccaaca ccccataccc tctagctcgg 79020  
 gttgcctgta cctggtaggg gtctgtgttg agatcaaaagt actctaggaa gccagtgtga 79080  
 aattcacaga agaggaaatt gtgagtctca ttgatggtcc tcatgcacca gtacgtgtta 79140  
 ttgtttggcg tgggtgcaggc acagaaaaggc cccactgcca aggaagagag agcatgtcct 79200  
 gagtgcctgc gggaggaggc cccatctgcc aacagtgtt cctgtcaggg acagccccta 79260  
 aaaccagtgc gtcaaatgcc aagagggtgt cccgagcacc gtggaccctt ggtgttgggg 79320  
 acccccttct tgagagaggt ctgggtcact aagtggagaa gtttcttgaa cccctggggc 79380  
 tcagcctgtc caccctgcc ctgggcttgc tcacgtgtcc agaaaggcgc cgtctgccag 79440  
 tgctggttgt cgtgggtgaa gcacgtgagg cctggcatgc tgcacgtgtc gttgttctgc 79500  
 aggcgtctga gcagcttgcg gagttttctc ttgcgttct cctcccgcaa cagccacacc 79560  
 ttgtccttct cttagcaggc cttcctatgg gcgcagaggg ccacacacac ctggggcctc 79620  
 tgagggatca gtgaccccat gtctctgtct ttctgtcca cctaagggct tcgctgaggc 79680  
 ttctccaaca gagagccatg ggcatagcaa ttcagggtcc caagtcccag tgctgtccca 79740  
 aggcagagcc gggaccagaa cctgggtctt gtcatcttac ttaactccc aagggggcac 79800  
 aagctgggga cagaaccagg cagctactgg gactcctggt gacacccctt tccctcctt 79860  
 cctgtgtcct gccctgcttg gtggagtgc ggtaacccca tttagccaca agggggcgctc 79920  
 ggaggcccg ctagtgttga ttgggaagta aggcctcttc gagggctacc gtggacttcc 79980  
 cagggaagg cctggacttc ttctcttttc ttctgagttt tagcttaagg gagggccacc 80040

tcctcatgca ggcctctgca tctcttcccc aggacctcaa gctgctctta cctgaaagga 80100  
 tgcagactgg agcctctgtg cttgaggcgg cctttgtgct ggggtgtgga gctgtaacag 80160  
 accccccca cccagggctt caggagtgcc tcagagggct ccgctggcag gtgcaagctg 80220  
 tgattttctg gactcccatg tggtgctgct gccccacccc tgtccctcct tctgggggtg 80280  
 tgggtggtag ggcagtagcc tatcctcagg gcagcagggt cctgcctgag tggctctctt 80340  
 ctccaagcat gagccaggac tctgcctgga cttttgctag acttttagcag gttgggttaa 80400  
 ttgtaattta gccacgacta gaagctgggc ctggctttag gtgcatcagc ctcagcatcc 80460  
 tttttccttt cttttttgat ggttaatttt acatgtcaaa gcctcagcat cttgaggttg 80520  
 gttccctcag caccctgcct actcacactt ggtcggggtc aacacaggga agcctgtgtt 80580  
 ttgcaacat tcttggaag acagcagggc ttctacagct gtgctgtcca gtatggttagc 80640  
 cactggccc aggtggctac ttcaatttga attaaagcaa ataaaaaatt tggctcctta 80700  
 gtgacactag ccaaattttt aagtatgcac cagccacgtg tgggtgtagt cagatatagc 80760  
 ccattttcgt cagcacagaa tgttctatta gagctgttct agagttcagt cctttggggc 80820  
 aggggacccc taagccggga acatggacct caaaccacat gggggatttc tgaagggca 80880  
 atcggcagag gcacttttcc ggcctggagc cggctctcg cagccagcac gggctctctg 80940  
 ctgacgtagt tggaaatctg gcgccagcct ggctgaggag cagggtccgtg tggcacactg 81000  
 gctgacaaca gggaggtaaa ttacggattt ttttaatgcc atgaggggag aagataaaga 81060  
 taaaaataaa aaatgaaagg ggtcaatcac gagaggggat gaactgaact gtcctgtagg 81120  
 agagtggggt cttagggagg tccctttgct actgcctcac ctgattttgt gacagtcaca 81180  
 ttcttctggc cgctttttct tcagggtgacc tcggacttcc ctcaggttct taattttgtt 81240  
 ctgacgggtt tcaatctgag ggaggggcag aagaggaggc cttgaaacct tcaaggctgg 81300  
 acaacaaaga cttggcctgg tgactgcccc cagcgtccg tgtctgtgct cagcagcggc 81360  
 agcctgcact ccccgggccc cagggcaagc accggcatgt ctgggtgggg aggaggtact 81420  
 tgttctgcct gaaggaaacc cgccttctcc tccagccagc ccttgcaagg gaaccgagtc 81480  
 atttttccgg cctggcctgc gcaggaaacc gctgagccca ctgaggccctc cagtgtctcc 81540  
 cctggggttg atgaaaggcc tcctgtagcg tagacttctt gtaagtcaaa aggggggaca 81600  
 cgtggctaag ccactgctcc tcagacggcc tgggcaggaa gctatctgtc tcactgctgg 81660  
 actgacacct atccccgcgt tgaggaaatct gtggggacct cacttcacct ctcacgcctc 81720  
 ttccctgggt ctggcctcac tgccctccca ctgtgaaccg ggggtcctgc caggcccggtg 81780

gtggccgaga gcatgctcct ctcccgtctt ccactcacct cgtggtcgat gtgcagcttg 81840  
 tggctcttcc aggcctgcag ggaactgtac aggtccaggt cactcaggac tgtgtcgttc 81900  
 tctaggatgt agcacctgct tgagagaagg gatcacgtgt ggctcggagg tggtaggggg 81960  
 ggagcagccc aggtgcccaa gaggtgtggg aagcccttgc cgaggtctgt cctgtccctc 82020  
 tcacctcga ctccacctg gacactcacc gatgtgtcac ttaaatggg ttggcggtcg 82080  
 aatagtcggg aaggcctcca gtgccactga agtccccacc atccttgtca tcttggtcct 82140  
 cagggggcca agaggtgttg gaagcccttt gccgaggtct gtctgtccc ctccacctc 82200  
 gacttccacc tggacactca ccatgtgtc actttaatgg ggttggcggc tgagtagctg 82260  
 ggaaggcctc cagtgcact gaagtcacca ccatccttgt catcttggtc ctccggggcc 82320  
 cctggccagt gccgcttggt gaggtttcgg ggctggggcg catcacccag gcctacgttg 82380  
 tacacctgc cgtccacctc gatggccact gagcggatgg agcagactcg gacatagctg 82440  
 gccttgtact ctgtgggcat tagaggagtg gcagagttag ggaggcagga aaggctggcc 82500  
 aggcctccca ggagtggggt ccttcaccaa gataggggcg ggcttccaag catgaggctc 82560  
 agctttgcct gcgactcgag gggctgtgga atctaccgc ctgctcgag atcctggacc 82620  
 gcagggggag gcctcgaggt gatcacacc gcaagacgga agtctggag ccaagaagcc 82680  
 actgactcaa gaggattcca agcgagagct gcttgcgggt aaacaaatgg cgtacatca 82740  
 tctgtacaa ggaatatcg accagaacca ggagcgaggt tctgattcac gctagagcgt 82800  
 ggatgaatgt caaaagcagg cggagtgaac ccagccagac acaagcggg ctctgattgt 82860  
 tacattctat ttataggaa taccagaat aggtaaatct atagcggcag aaagaagatt 82920  
 ggtgattgcc aggggctggg ggagagggtg gtgaggagt actgctttgt ggttacgggg 82980  
 ttcccttttg ggtgatgaa atgttttgga actaggtaga ggtgtgcaac actgtgaacc 83040  
 tattaatgc ctctgcattg tatataattg taaaaatgg gagttgatg ttatctgaac 83100  
 ttcacctcaa ttaaaaagga aaaaaagtat catggatgta aaaaatgtta ttaaaactgg 83160  
 gaaaaagggg cctgcagtg cctgtctctg ggtagaaatg gacggggact ggggaagcca 83220  
 cttagcttct ttgagtccca gagagctgga ggctgccac caggtggtag gcaggtgcta 83280  
 caccagggtg ggccggcaac aaggctgagg ggggcttttg cataccctc gacgtgaaa 83340  
 actcagggtg gcaggctgaa gtgacacccc aggtagcctg tatcttctat gtctcaaaaa 83400  
 caaatctgag ttggtaacat taaagaaaaa ggggaggttg tggcgggtgat gtagggatcc 83460

agatttcag cttccagaaa ggaacagat gtctcacggg cccacagttc catatggtca 83520  
 ggacggggcg gggatgggag gccctcttgg ctgccactg tcttccctgt tggccacagc 83580  
 ccccgccact ccttctctgt ttaaaacctc tgcccactg acacatgtct gggcccagca 83640  
 ggcacgcact gcagttgtca tcttctcca gatgtgcctc atttaaagag aagggcctgg 83700  
 agccagttag tgaccaggt tttgttggat cccaagtac cccagagatg tgaccaaaaga 83760  
 ggaccagctg gaggcaggtg gtggcggaag gcagtggaa gaggaggaa agggctccct 83820  
 tctcacgttg cccgggtgcc acccccactc ttgggggatg ttttctatct ttcagttctc 83880  
 agacacottg catcacagtc acaaggccg aagatcctg aggggccggg aaagcctcc 83940  
 cctctccagc agagccttgg gcctttctg acacaggca gccttctctc gggcacttct 84000  
 ctccctcggt ttagtctccc gatgcaagta cacaattgc caggatggt cctgtgtcca 84060  
 agcaggctct ccccagagag gctcaggaaa tagaccagc gtgtcctctc cactcctttt 84120  
 gtctacgtg gctcataagt gagctgcttt gcctctttcc accctccatc tcccagctct 84180  
 agattcagg gtcctaaac catggcctaa gggccaggc cagcctccat ctgtctttgt 84240  
 gaatacagtt tcactgggta cagctgctcg cattccctta tactctgca gtgcagggc 84300  
 tgagttgcaa agcccaagac ctttactctc tggctcttca cagaagcggg atgccagccc 84360  
 tgtgtgaatc ctttctggga ctgaagccac actacctgct ctcccatac ctctgtgttc 84420  
 atgtccagag tcttgagggt acccttctg ccacaccaac agggaaatggg acaggacttc 84480  
 ataacccggc ggccaagagc tttgactctg caatcagatg gctcagggtc aaaccctga 84540  
 gcacatgtgt gggcccgcg atttgggtaa cttctcagga tgggtgcctac cctacaaagg 84600  
 ctccctggag gatggcacga aacggaaacta gtgaagcatt catgctgtat gagctggtgt 84660  
 ggaccagcta ctgcaggggg tggggaactc gcctgcagct gacgtcctca cctaaaggta 84720  
 caaccctggg cccactccct gcctctccac gcgggtgacc gcctgtgtga tgtggctgcc 84780  
 catgccatg gtgtcttcca ccaccctcg ccacaccgt cactctctg tgactgggac 84840  
 tcaccgccct gattctgagc acagggtctt tgtactccat ctctctctc ctcaaacac 84900  
 ttgtctctg gctggtcaca agacctgtc ctttctgtac tttgttctca ttaaatgtcc 84960  
 attgagcgcc attctggagc cgcacccct ctctgtagt cccgccaccg ctgcgtctcc 85020  
 ttcattgctt ttccaccagc ggaagtggcc ctttgttccac ttgttccat cttgtttcat 85080  
 ccatgaggtc caagtccgtg tctctcagg tcaactctaa tctcagtgtc ttgcacaaag 85140  
 ttcaagaaat gaatgaacc cagtcagctg ggccatccc ccaggtctc gtccctctct 85200

```

cctgttctct ggtccccctt ctgctgtgag ctggctggct ctgcctaacc tccccacgcc 85260
acagccagga tccccgtgga tcaaggtggg ccagggcttc ccaaccttac cactgcggac 85320
actttggggg cagatcaaac tctgtggtgg gggccgtcct gtgcgttgca agatgttttg 85380
ccgcatccat agcctctgct cactagacgc cagcagcacc cctccatcac acacaattgt 85440
gacagccaaa actgtctcca aacattgcca agtgtccctt gggggacaga aagccccagc 85500
ttcagcctgc tctaggctga ctgctcagaa aagagggaca gagtgtcttg tcggagactc 85560
tagcaggggg aagaatgcca ggcaggagat ggggctggag tcccaaatc agccacgtga 85620
cccagtcctt cctgtccatc atccccctgat gatcaccctt gcctgtctca cagggtctgt 85680
gagagggtga ggtccgggct ctgacattac actcacatga ggattctgac cagggtctgag 85740
ctgactctca gctactttta ggtatttttc tttctcttaa gcattaataa ggggaaaaga 85800
gctgaatttc tcctgccag atcttgtatt atttaagat tatcgactgt gccacatatt 85860
gaagcaagga gatgtcggtc gtgtaatcca atctggaaac caatcattct gttcagctag 85920
aaaagttaat gtagtagttc ctaatcagct ggtgaggaaa tgtaacggag ggtcatcagc 85980
tgggaaaagg gtgttcaggc agtggctggg ctgttatgga gagagactta tctgtctcac 86040
gatgaagaca tttgtgcctt ggctggctgg accagaggag atcactgcgc ctgccgtcag 86100
agacctcaat ctctaactag tctgtggtac aatatcatcc gtcttataaa gaatggagac 86160
tttttgtttt ttttgagaca gtcttgcctt gtcaccacag ctggagtgaat gtggcatgat 86220
ctcagttcac tgcaacctcc cgctcccagg ttcaagccat tctagtgcct cagctcctgt 86280
agtagcaggg actacaggcg cccaccacca tgcttggtta atttttgtat ttttagtaga 86340
cacgggttct accttgttgg ccagactggc ctcgaacttc tgagctcagg caatccgcct 86400
gccttgccct cccgaaatgc tgggattaca ggcgtgagcc actgtgcccg atc 86453

```

```

<210> 6
<211> 4397
<212> DNA
<213> Homo sapiens

```

```

<400> 6
gagcgagagt gtgtcagagt agtgtgcgtc tgtgtgtccc ggcgagggtg cgcgtctggc 60
gcggggagcg cgccagcccg agtccggagg catcgggagg tcgagagcgg ccgggacccc 120
agctctgcgt tcaactgccc gtcgggagct ggacttcggg gccggggccg gggccgtgcg 180
ccggggacag cgagggccgg gtcgcggggc gcgctcccc caggccggag atctcgagat 240

```

gaagagggagc aaggggaaaag aaacaaagcc acagacgcaa cttgagactc ccgcatccca 300  
 aaagaagcac cagatcagca aaaaaagaag atggggccccc cgagcctcgt gctgtgcttg 360  
 ctgtccgcaa ctgtgttctc cctgctgggt ggaagctcgg ccttcctgtc gcaccaccgc 420  
 ctgaaaggca ggtttcagag ggaccgcagg aacatccgcc ccaacatcat cctggtgctg 480  
 acggagcacc aggatgtgga gctgggttcc atgcaggta tgaacaagac ccggcgcatc 540  
 atggagcagg ggggagcga cttcatcaac gccttcgtga ccacacccat gtgctgcccc 600  
 tcacgctcct ccatcctcac cggcaagtae gtccacaacc acaacaccta caccaacaat 660  
 gagaactgct cctcgccctc ctggcaggca cagcacgaga gccgcacett tgccgtgtac 720  
 ctcaatagca ctggctaccg gacagcttcc ttcgggaagt atcttaatga atacaacggc 780  
 tcctactgtc caccggctg gaaggagtgg gtccgactcc ttaaaaactc ccgcttttat 840  
 aactacacgc tgtgtcgaa cggggtgaaa gagaagcacg gctccgacta ctccaaggat 900  
 tacctcacag acctcatcac caatgacagc gtgagcttct tccgcacgtc caagaagatg 960  
 taccgcaca ggcagtcct catggtcatc agccatgcag ccccccacgg cctgaggat 1020  
 tcagccccc aatattcacg cctcttccca aacgcatctc agcacatcac gccagactac 1080  
 aactacgcgc ccaaccggga caaactctgg atcatgcgct acacggggcc catgaagccc 1140  
 atcccatgga aattcaccaa catgctccag cggaagcgct tgcagaccct catgtcggtg 1200  
 gacgactcca tggagacgat ttacaacatg ctggttgaga cgggcgagct ggacaacacg 1260  
 tacatgatat acaccgccga ccacgggtac cacatcgccc agtttggcct ggtgaagggg 1320  
 aaatccatgc catatgagtt tgacatcagg gtcccgttct acgtgagggg ccccaacgtg 1380  
 gaagccggct gtctgaatcc ccacatcgtc ctcaacattg acctggcccc caccatcctg 1440  
 gacattgcag gcctggacat acctgcggat atggacggga aatccatcct caagctgctg 1500  
 gacacggagc ggcgggtgaa tcggtttcac ttgaaaaaga agatgagggc ctggcgggac 1560  
 tccttcttgg tggagagagg caagctgcta cacaagagag acaatgacaa ggtggacgcc 1620  
 caggaggaga actttctgcc caagtaccag cgtgtgaagg acctgtgtca gctgtcgtgag 1680  
 taccagacgg cgtgtgagca gctgggacag aagtggcagt gtgtggagga cggccagggg 1740  
 aagctgaagc tgcataagtg caagggcccc atgcggctgg gcggcagcag agccctctcc 1800  
 aacctcgtgc ccaagtacta cgggcagggc agcagggcct gcacctgtga cagcggggac 1860  
 tacaagctca gcctggccgg acgcccggaa aaactcttca agaagaagta caaggccagc 1920

tatgtccgca gtcgctccat ccgctcagtg gccatcgagg tggacggcag ggtgtaccac	1980
gtaggcctgg gtgatgccgc ccagccccga aacctcacca agcggcactg gccagggggc	2040
cctgaggacc aagatgacaa ggatgggtggg gacttcagtg gcactggagg ccttcccgac	2100
tactcagcgc ccaaccccat taaagtgaca catcggtgct acatcctaga gaacgacaca	2160
gtccagtggt acctggacct gtacaagtcc ctgcaggcct ggaaagacca caagctgcac	2220
atcgaccacg agattgaaac cctgcagaac aaaattaaga acctgagggg agtccgaggt	2280
cacctgaaga aaaagcggcc agaagaatgt gactgtcaca aaatcagcta ccacaccag	2340
cacaaaggcc gcctcaagca cagaggctcc agtctgcac ctttcaggaa gggcctgcaa	2400
gagaaggaca aggtgtggct gttgcgggag cagaagcgca agaagaaact ccgcaagctg	2460
ctcaagcgcc tgcagaacaa cgacacgtgc agcatgccag gcctcacgtg cttcaccac	2520
gacaaccagc actggcgac ggcgccttcc tggacactgg ggcccttctg tgcctgcacc	2580
agcgccaaca ataacacgta ctgggtgcatg aggaccatca atgagactca caatttcctc	2640
ttctgtgaat ttgcaactgg ctctctagag tactttgatc tcaacacaga cccctaccag	2700
ctgatgaatg cagtgaacac actggacagg gatgtcctca accagctaca cgtacagctc	2760
atggagctga ggagctgcaa ggggtacaag cagtgtaac cccggactcg aaacatggac	2820
ctgggactta aagatggagg aagctatgag caatacaggc agtttcagcg tcgaaagtgg	2880
ccagaaatga agagaccttc ttccaaatca ctgggacaac tgtgggaagg ctgggaaggt	2940
taagaaacaa cagagtgga cctccaaaa catagaggca tcacctgact gcacaggcaa	3000
tgaaaaacca tgtgggtgat ttccagcaga cctgtgctat tggccaggag gcctgagaaa	3060
gcaagcacgc actctcagtc aacatgacag attctggagg ataaccagca ggagcagaga	3120
taacttcagg aagtcatttt ttgccctgc ttttgctttg gattatacct caccagctgc	3180
acaaaatgca ttttttctga tcaaaaagtc accactaacc ctccccaga agctcacaaa	3240
ggaaaacgga gagagcgagc gagagagatt tccttggaag tttctccaa gggcgaaagt	3300
catttgaatt ttttaaatcat aggggaaaaag cagtctgtt ctaaatctct ttattctttt	3360
ggtttgtcac aaagaaggaa ctaagaagca ggacagaggc aacgtggaga ggtgaaaaac	3420
agtgcagaga cgtttgacaa tgagtcagta gcacaaaaga gatgacattt acctagcact	3480
ataaacctctg gttgcctctg aagaaactgc cttcattgta tatatgtgac tatttcatctg	3540
taatcaacat gggaactttt aggggaacct aataagaaat cccaattttc aggagtggtg	3600
gtgtcaataa acgctctgtg gccagtgtaa aagaaaatcc ctgcagttg tggacatttc	3660

tggtcctgtc cagataccat ttctcctagt atttctttgt tatgtccag aactgatgtt	3720
ttttttttaa ggtactgaaa agaatgaag ttgatgtatg tcccaagttt tgatgaaact	3780
gtatttgtaa aaaaaatttt gtagtttaag tattgtcata cagtgtcaa aacccagcc	3840
aatgaccagc agttggtatg aagaaccttt gacattttgt aaaaggccat ttctttcttg	3900
ggagtttttt ggtgtgtctg tttttttaaa gtattcaaga tactaccagt caacatcttt	3960
ttggaagaaa atgccttggg tttagaagat ttcttataaa ggggagtaga tgggtttaga	4020
ttgactaaaa agtctaccat actcaaggg actacagga agtctcatag tataccagct	4080
ttggtacttc attttttaaa aaagtattaa tcaattgcaa agaaattgc cttggccaac	4140
ccttctttgt gtatcagga gtctaactg atacaagtag ttgacagatt tcaactatca	4200
atcaccagtc caaccattt ctcatttaac agatgacgga gataatccct aaaagcacc	4260
acatttgttt caatgccca aacaggccaa ggctccctag caactcccta gtggcgtttt	4320
ttaactcttc agaaactgtt accattattt gaaataggct tccttaacct cctttaccct	4380
taaccaaca gggattt	4397

<210> 7  
 <211> 1661  
 <212> DNA  
 <213> Homo sapiens

<400> 7	
ggcactggcc agggggccct gaggaccaag atgacaagga tgggtgggac ttcagtggca	60
ctggaggcct tcccgactac tcagccgcca acccattaa agtgacacat cgggtgtaca	120
tcctagagaa cgacacagtc cagtgtgacc tggacctgta caagtccctg caggcctgga	180
aagaccacaa gctgcacatc gaccacgaga ttgaaacct gcagaacaaa attaagaacc	240
tgagggaagt ccgaggtcac ctgaagaaaa agcggccaga agaattgtgac tgcacaaaa	300
tcagctacca caccagcac aaaggccgcc tcaagcacag aggcctccagt ctgcctcctt	360
tcaggaaagg cctgcaagag aaggacaagg tgtggctgtt gcgggagcag aagcgcaaga	420
agaaactccg caagctgctc aagcgctgc agaacaacga cacgtgcagc atgccaggcc	480
tcacgtgctt caccacgac aaccagcact ggcagacggc gcctttcttg acactggggc	540
ctttctgtgc ctgcaccagc gccaaacata acacgtactg gtgcatgagg accatcaatg	600
agactcacia ttctctcttc tgtgaatttg caactggctt cctagagtac ttgatctca	660
acacagaccc ctaccagctg atgaatgcag tgaacacact ggacaggat gtcctcaacc	720



```

agctacacgt acagctcatg gagctgagga gctgcaaggg ttacaagcag tgtaaccccc 780
ggactcga aa catggacctg ggacttaaag atggaggaag ctatgagcaa tacaggcagt 840
ttcacgctcg aaagtggcca gaaatgaaga gaccttcttc caaatcactg ggacaactgt 900
gggaaggctg ggaaggttaa gaaacaacag aggtggacct ccaaaaacat agaggcatca 960
cctgactgca caggcaatga aaaacatgt ggggtatttc cagcagacct gtgctatttg 1020
ccaggaggcc tgagaaagca agcacgcact ctacgtcaac atgacagatt ctggaggata 1080
accagcagga gcagagataa cttcaggaag tccatttttg cccctgcttt tgctttggat 1140
tatactcac cagctgcaca aaatgcattt ttctgtatca aaaagtcacc actaaccttc 1200
ccccgaagc tcacaaagga aaacggagag agcgagcgag agagatttcc ttggaaattt 1260
ctcccaaggg cgaaagtcac tggaattttt aaatcatagg ggaaaagcag tctgtttcta 1320
aatcctctta ttcttttggg ttgtcacaaa gaaggaacta agaagcagga cagaggcaac 1380
gtggagaggc tgaaacagct gcagagacgt ttgacaatga gtcagtagca caaaagagat 1440
gacatttacc tagcactata aacctgggtt gcctctgaag aaactgcctt cattgtatat 1500
atgtgactat ttacatgtaa tcaacatggg aacttttagg ggaacctaat aagaatccc 1560
aattttcagg agtgggtggt tcaataaacg ctctgtggcc agtgtaaaag aaaaaaaaaa 1620
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 1661

```

```

<210> 8
<211> 3906
<212> DNA
<213> Homo sapiens

```

```

<400> 8
ctcgggcgcg cacaggcagc tcgggtttgcc ctgcgattga gctgcgggtc gcgcccgcg 60
ccggcctctc caatggcaaa tgtgtgtggc tgaggcgag cgcgaggctt tcggcaagg 120
cagtcgagtg tttgcagacc ggggcgagtc ctgtgaaagc agataaaaga aaacatttat 180
taacgtgtca ttacaggggg agcgcccgcc cggggtgtgc gcaactcccc cggaacattt 240
ggctccctcc agctccgaga gaggagaaga agaaagcgga aaaggcgag attcacgtcg 300
tttccagcca agtgagacct atcgatggcc ctctgaatt tatcacgata tttgatttat 360
tagcgatgcc ccctgggttg tgtgttacgc acacacacgt gcacacaagg ctctggctcg 420
cttccctccc tcgtttccag ctccctggcg aatcccacat ctgtttcaac tctccgcca 480
gggcgagcag gagcgagagt gtgtcgaaat tgcgagtgaa gagggacgag ggaagaaga 540

```

caaagccaca gacgcaactt gagactcccg catcccaaaa gaagcaccag atcagcaaaa	600
aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg tgttctccct	660
gctgggtgga agctcggcct tcctgtcgca ccaccgcctg aaaggcaggt ttcagaggga	720
ccgcaggaac atccgcccc aatcatcctt ggtgctgacg gacgaccagg atgtggagct	780
gggttccatg cagggtgatga acaagaccgg gcgcatcatg gagcagggcg gggcgccactt	840
catcaacgcc ttctgtacca caccatgtgt ctgcccctca cgctcctcca tctcactcgg	900
caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct gcgcctcctg	960
gcaggcacag cagcagagcc gcacctttgc cgtgtacctc aatagcactg gctaccggagc	1020
agctttcttc gggaggtatc ttaatgaata caacggctcc tacgtgccac ccggtggaa	1080
ggagtgggtc ggactcctta aaaactcccg cttttataac tacacgctgt gtcggaacgg	1140
ggtgaaagag aagcacggct ccgactactc caaggattac ctacagacc tcatacccaa	1200
tgacagcgtg agctttcttc gcacgtccaa gaagatgtac ccgcacaggc cagtctcat	1260
ggtcatcagc catgcagccc ccacggccc tgaggattca gcccacaaat attcacgcct	1320
cttcccaaac gcattctcagc acatcacgcc gagctacaac tacgcgccca acccgacaa	1380
acactggatc atcgctaca cggggcccat gaagcccatc cacatggaat tcaccaacat	1440
gctccagcgg aagcgcttgc agaccctcat gtcggtgagc gactccatgg agacgattta	1500
caacatgctg gttgagacgg gcgagctgga caacacgtac atcgataaca ccgcgacca	1560
cggttaccac atcgccaggt ttggcctggt gaaagggaaa tccatgcat atgagtttga	1620
catcagggtc ccgttctacg tgagggggcc caacgtggaa gccggctgtc tgaatcccca	1680
catcgtctc aacattgacc tggccccac catcctggac attgcaggcc tggacatacc	1740
tcgggatatg gacgggaaat ccactctcaa gctgctggac acggagcggc cggtaatcg	1800
gtttcacttg aaaaagaaga tgagggctct gcgggactcc ttcttggtgg agagaggcaa	1860
gctgctacac aagagagaca atgacaaggt ggacgccag gaggagaact ttctgcccaa	1920
gtaccagcgt gtgaaggacc tgtgtcagcg tgctgagtag cagacggcgt gtgacagct	1980
gggacagaag tggcagtggt tggaggacgc caccgggaag ctgaagctgc ataagtcaa	2040
gggccccatg cggctggggc gcagcagagc cctctccaac ctctgcccc agtactacgg	2100
gcaggggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc tggccggagc	2160
ccggaaaaaa ctcttcaaga agaagtacaa ggccagctat gtccgcagtc gctccatcgg	2220

ctcagtgccc atcgaggtgg acggcaggggt gtaccacgta ggccctgggtg atgccgccc	2280
gccccgaac atcaccaagc ggcaactggcc agggggccct gaggaccaag atgacaagga	2340
tgggtgggac ttcagtgcca ctggaggcct tcccgaactc tcagccgcca accccattaa	2400
agtgacacat cgggtgctaca tcctagagaa cgacacagtc cagtgtgacc tggacctgta	2460
caagtcctcg caggcctgga aagaccacaa gctgcacatc gaccacgaga ttgaaacct	2520
gcagaacaaa attaagaacc tgagggaagt ccgaggtcac ctgaagaaaa agcggccaga	2580
agaatgtgac tgtcacaaaa tcagctacca caccagcac aaaggccgcc tcaagcacag	2640
aggctccagt ctgcatcctt tcaggaaggg cctgcaagag aaggacaagg tgtggctgtt	2700
gcgggagcag aagcgcaaga agaaactccg caagctgctc aagcgctgc agaacaaga	2760
cacgtgcagc atgccaggcc tcacgtgctt caccacgac aaccagcact ggcagacggc	2820
gctttctctg acactggggc ctttctgtgc ctgaccagc gccacaata acacgtactg	2880
gtgcatgagg accatcaatg agactacaa tttctcttc tgtgaatttg caactggctt	2940
cctagagtac tttagtctca acacagacct ctaccagctg atgaatgcag tgaacacact	3000
ggacagggat gtcctcaacc agctacacgt acagctcatg gagctgagga gctgcaagg	3060
ttacaagcag tgtaaccccc ggactcgaaa catggacctg gatggaggaa gctatgagca	3120
atacaggcag tttcagcgtc gaaagtggcc agaaatgaag agacctctt ccaaatcact	3180
gggacaactg tgggaaggct ggggaaggta agaaacaaca gaggtggacc tccaaaaaca	3240
tagaggcatc acctgactgc acaggcaatg aaaaacctg tgggtgattt ccagcagacc	3300
tgtgctattg gccaggaggc ctgagaaagc aagcacgcac tctcagtaa catgacagat	3360
tctggaggat aaccagcagg agcagagata acttcaggaa gtccattttt gccctgtctt	3420
ttgctttgga ttatacctca ccagctgcac aaaatgcatt tttcgtatc aaaaatcac	3480
cactaacctt ccccccagaag ctacaaaagg aaaacggaga gagcgagcga gagagatttc	3540
cttgaaattt tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca	3600
gtcctgttct aaatcctctt attcttttgg ttgtgcaca agaaggaaat aagaagcagg	3660
acagaggcaa cgtggagagg ctgaaaacag tgcagagacg tttgacaatg agtcagttagc	3720
acaaaagaga tgacatttac ctagcactat aaacctgggt tgcctctgaa gaaactgcct	3780
tcattgtata tatgtgacta tttacatgta atcaacatgg gaacttttag gggaacctaa	3840
taagaatacc caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa	3900
gaaaaa	3906

<210> 9  
 <211> 3843  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
 gagcagagtg gtgtcgagtg agtgtgcgtc tgtgtgtccc ggcgagggtg cgcgctcggc 60  
 gccgggagcg cggccagccg agtccggagg catcgggagg tcgagagccg ccgggaacccc 120  
 agctctgcgt tcaactgcccc gtccggagct ggacttcggg gccggggccg gggccgtgcg 180  
 ccggggacag gcaggggccg gtccggggcc gcgcgtcccc caggccggag atctgcgagtg 240  
 gaagagggac gagggaagg aaacaaagcc acagacgcaa cttgagactc ccgcatccca 300  
 aaagaagcac cagatcagca aaaaaagaag atgggcccc cgagcctcgt gctgtgcttg 360  
 ctgtccgcaa ctgtgttctc cctgctgggt ggaagctcgg ccttcctgtc gcaccaccgc 420  
 ctgaaaggca ggtttcagag ggaccgcagg aacatccgcc ccaacatcat cctggtgctg 480  
 acggacgacc aggatgtgga gctgggttcc atgcaggtga tgaacaagac ccggcgcatc 540  
 atgggacgag gccggggcgca cttcatcaac gccttcgtga ccacacccat gtgctgcccc 600  
 tcacgctcct ccactctcac tggcaagtac gtccacaacc acaacaccta caccaacaat 660  
 gagaactgct cctcgccctc ctggcaggca cagcacgaga gccgcacctt tgccgtgtac 720  
 ctcaatagca ctggctaccg gacagcttcc ttcggggaagt atcttaatga atacaacggc 780  
 tcctacgtgc caccggcgct gaaggagtgg gtccggactcc ttaaaaaactc ccgcttttat 840  
 aactacacgc tgtgtcggaa cggggtgaaa gagaagcacg gctccgacta ctccaaggat 900  
 tacctcacag acctcatcac caatgacagc gtgagcttct tccgcacgtc caagaagatg 960  
 taccgcgaca ggcagtcct catggtcatc agccatgcag cccccacgg ccctgaggat 1020  
 tcagccccac aatattcacg cctcttccca aacgcatctc agcacatcac gccgagctac 1080  
 aactacgcgc ccaaccggga caaacactgg atcatgcgct acacggggcc catgaagccc 1140  
 atccacatgg aattaccaa catgctccag cggaagcgct tgcagaccct catgtcggtg 1200  
 gacgactcca tggagacgat ttacaacatg ctggttgaga cgggagagct ggacaacacg 1260  
 tacatcgtat acacgcgca ccacgggttac cacatcgcc agtttgccct ggtgaaaggg 1320  
 aaatccatgc catatgagtt tgacatcagg gtcccgttct acgtgagggg ccccaacgtg 1380  
 gaagccggct gtctgaatcc ccacatcgct ctcaacattg acctggcccc caccatcctg 1440  
 gacattgcag gcctggacat acctgcggat atggacggga aatccatcct caagctgctg 1500

gacacggagc ggccggtgaa tcggtttcac ttgaaaaaga agatgagggc ctggcgggac	1560
tccttcttgg tggagagagg caagctgcta cacaagagag acaatgacaa ggtggacgcc	1620
caggaggaga actttctgcc caagtaccag cgtgtgaagg acctgtgtca gcgtgctgag	1680
taccagacgg cgtgtgagca gctgggacag aagtggcagt gtgtggagga gcgcacgggg	1740
aagctgaagc tgcataagtg caagggcccc atcgggctgg gcggcagcag agccctctcc	1800
aacctcgtgc ccaagtacta cgggcagggc agcgaggcct gcacctgtga cagcggggac	1860
tacaagctca gcctggccgg acgcccga aaactcttca agaagaagta caagccagc	1920
tatgtccgca gtgcctccat ccgctcagtg gccatcgagg tggacggcag ggtgtaccac	1980
gtaggccctgg gtgatgccgc ccagccccga aacctcacca agcggcactg gccagggggc	2040
cctgaggacc aagatgacaa ggtgggtggg gacttcagtg gcactggagg ccttcccgac	2100
tactcagccg ccaaccccat taaagtgaca catcggtgct acatcctaga gaacgacaca	2160
gtccagtgtg acctggacct gtacaagtc ctgcaggcct ggaagacca caagctgcac	2220
atcgaccacg agattgaaac cctgcagaac aaaattaaga acctgagggg agtccgaggt	2280
cacctgaaga aaaagcgccc agaagaatgt gactgtcaca aaatcagcta ccacaccag	2340
cacaaaggcc gcctcaagca cagaggctcc agtctgcac ctttcaggaa gggcctgcaa	2400
gagaaggaca aggtgtggct gttgcgggag cagaagcgca agaagaaact ccgcaagctg	2460
ctcaagcgcc tgcagaacaa cgacacgtgc agcatgccag gcctcacgtg cttcaccac	2520
gacaaccagc actggcagac ggcgcccttc tggacactgg ggcctttctg tgccctgcac	2580
agcgccaaca ataacacgta ctggtgcatg aggaccatca atgagactca caatttcctc	2640
ttctgtgaat ttgcaactgg ctctcctagag tactttgatc tcaacacaga ccctaccag	2700
ctgatgaatg cagtgaacac actggacagg gatgtcctca accagctaca cgtacagctc	2760
atggagctga ggagctgcaa gggttacaa cagtgttaacc ccgggactcg aaacatggac	2820
ctgggactta aagatggagg aagctatgag caatacaggg gacaactgtg ggaaggctgg	2880
gaaggttaag aaacaacaga ggtggacctc caaaaacata gaggcatcac ctgactgcac	2940
aggcaatgaa aaacatgtg ggtgattttc agcagacctg tggatttggc caggaggcct	3000
gagaagcaa gcacgcactc tcagtcaaca tgacagattc tggaggataa ccagcaggag	3060
cagagataac ttcagggaagt ccatttttgc ccctgctttt gctttggatt atacctcacc	3120
agctgcacaa aatgcatttt ttcgtatcaa aaagtcacca ctaaccctcc ccagaaagct	3180

```

cacaaaggaa aacggagaga gcgagcgaga gagatttcct tggaaatttc tccaagggc 3240
gaaagtcatt ggaattttta aatcataggg gaaaagcagt cctgttctaa atcctcttat 3300
tcttttggtt tgtcacaaag aaggaactaa gaagcaggac agaggcaacg tggagaggct 3360
gaaaacacg catgagacgtt tgacaatgag tcagtagcac aaaagagatg acatttacct 3420
agcactataa accctggttg cctctgaaga aactgccttc attgtatata tgtgactatt 3480
tacctgtaat caacatggga acttttaggg gaacctaata agaaatccca attttcagga 3540
gtggtgtggt caataaacgc tctgtggcca gtgtaaaaga aaatccctcg cagtgtgtga 3600
catttctggt cctgtccaga taccatttct cctagtattt cttgttatg tcccagaact 3660
gatgtttttt ttttaagga ctgaaaagaa atgaagttga tgtatgtccc aagttttgat 3720
gaaactgtat ttgtaaaaa aattttgtag ttttaagtatt gtcatacagt gttcaaaacc 3780
ccagccaatg accagcagtt ggtatgaaga acctttgaca ttttgtaaaa ggccatttct 3840
tgg 3843

```

```

<210> 10
<211> 871
<212> PRT
<213> Homo sapiens

```

```

<400> 10

```

```

Met Lys Tyr Ser Cys Cys Ala Leu Val Leu Ala Val Leu Gly Thr Glu
1           5           10           15

```

```

Leu Leu Gly Ser Leu Cys Ser Thr Val Arg Ser Pro Arg Phe Arg Gly
          20           25           30

```

```

Arg Ile Gln Gln Glu Arg Lys Asn Ile Arg Pro Asn Ile Ile Leu Val
          35           40           45

```

```

Pro Thr Asp Asp Gln Asp Val Glu Leu Gly Ser Leu Gln Val Met Asn
50           55           60

```

```

Lys Thr Arg Lys Ile Met Glu His Gly Gly Ala Thr Phe Ile Asn Ala
65           70           75           80

```

```

Phe Val Thr Thr Pro Met Cys Cys Pro Ser Arg Ser Ser Met Leu Thr
          85           90           95

```

```

Gly Lys Tyr Val His Asn His Asn Val Tyr Thr Asn Asn Glu Asn Cys

```

100	105	110
Ser Ser Pro Ser Trp Gln Ala Met His Glu Pro Arg Thr Phe Ala Val 115 120		
Tyr Leu Asn Asn Thr Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu 130 135 140		
Asn Glu Tyr Asn Gly Ser Tyr Ile Pro Pro Gly Trp Arg Glu Trp Leu 145 150 155 160		
Gly Leu Ile Lys Asn Ser Arg Phe Tyr Asn Tyr Thr Val Cys Arg Asn 165 170 175		
Gly Ile Lys Glu Lys His Gly Phe Asp Tyr Ala Lys Asp Tyr Phe Thr 180 185 190		
Asp Leu Ile Thr Asn Glu Ser Ile Asn Tyr Phe Lys Met Ser Lys Arg 195 200 205		
Met Tyr Pro His Arg Pro Val Met Met Val Ile Ser His Ala Ala Pro 210 215 220		
His Gly Pro Glu Asp Ser Ala Pro Gln Phe Ser Lys Leu Tyr Pro Asn 225 230 235 240		
Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn Met Asp 245 250 255		
Lys His Trp Ile Met Gln Tyr Thr Gly Pro Met Leu Pro Ile His Met 260 265 270		
Glu Phe Thr Asn Ile Leu Gln Arg Lys Arg Leu Gln Thr Leu Met Ser 275 280 285		
Val Asp Asp Ser Val Glu Arg Leu Tyr Asn Met Leu Val Glu Thr Gly 290 295 300		
Glu Leu Glu Asn Thr Tyr Ile Ile Tyr Thr Ala Asp His Gly Tyr His 305 310 315 320		
Ile Gly Gln Phe Gly Leu Val Lys Gly Lys Ser Met Pro Tyr Asp Phe 325 330 335		

Asp Ile Arg Val Pro Phe Phe Ile Arg Gly Pro Ser Val Glu Pro Gly  
 340 345 350  
 Ser Ile Val Pro Gln Ile Val Leu Asn Ile Asp Leu Ala Pro Thr Ile  
 355 360 365  
 Leu Asp Ile Ala Gly Leu Asp Thr Pro Pro Asp Val Asp Gly Lys Ser  
 370 375 380  
 Val Leu Lys Leu Leu Asp Pro Glu Lys Pro Gly Asn Arg Phe Arg Thr  
 385 390 395 400  
 Asn Lys Lys Ala Lys Ile Trp Arg Asp Thr Phe Leu Val Glu Arg Gly  
 405 410 415  
 Lys Phe Leu Arg Lys Lys Glu Glu Ser Ser Lys Asn Ile Gln Gln Ser  
 420 425 430  
 Asn His Leu Pro Lys Tyr Glu Arg Val Lys Glu Leu Cys Gln Gln Ala  
 435 440 445  
 Arg Tyr Gln Thr Ala Cys Glu Gln Pro Gly Gln Lys Trp Gln Cys Ile  
 450 455 460  
 Glu Asp Thr Ser Gly Lys Leu Arg Ile His Lys Cys Lys Gly Pro Ser  
 465 470 475 480  
 Asp Leu Leu Thr Val Arg Gln Ser Thr Arg Asn Leu Tyr Ala Arg Gly  
 485 490 495  
 Phe His Asp Lys Asp Lys Glu Cys Ser Cys Arg Glu Ser Gly Tyr Arg  
 500 505 510  
 Ala Ser Arg Ser Gln Arg Lys Ser Gln Arg Gln Phe Leu Arg Asn Gln  
 515 520 525  
 Gly Thr Pro Lys Tyr Lys Pro Arg Phe Val His Thr Arg Gln Thr Arg  
 530 535 540  
 Ser Leu Ser Val Glu Phe Glu Gly Glu Ile Tyr Asp Ile Asn Leu Glu  
 545 550 555 560



Glu Glu Glu Glu Leu Gln Val Leu Gln Pro Arg Asn Ile Ala Lys Arg  
 565 570 575

His Asp Glu Gly His Lys Gly Pro Arg Asp Leu Gln Ala Ser Ser Gly  
 580 585 590

Gly Asn Arg Gly Arg Met Leu Ala Asp Ser Ser Asn Ala Val Gly Pro  
 595 600 605

Pro Thr Thr Val Arg Val Thr His Lys Cys Phe Ile Leu Pro Asn Asp  
 610 615 620

Ser Ile His Cys Glu Arg Glu Leu Tyr Gln Ser Ala Arg Ala Trp Lys  
 625 630 635 640

Asp His Lys Ala Tyr Ile Asp Lys Glu Ile Glu Ala Leu Gln Asp Lys  
 645 650 655

Ile Lys Asn Leu Arg Glu Val Arg Gly His Leu Lys Arg Arg Lys Pro  
 660 665 670

Glu Glu Cys Ser Cys Ser Lys Gln Ser Tyr Tyr Asn Lys Glu Lys Gly  
 675 680 685

Val Lys Lys Gln Glu Lys Leu Lys Ser His Leu His Pro Phe Lys Glu  
 690 695 700

Ala Ala Gln Glu Val Asp Ser Lys Leu Gln Leu Phe Lys Glu Asn Asn  
 705 710 715 720

Arg Arg Arg Lys Lys Glu Arg Lys Glu Lys Arg Arg Gln Arg Lys Gly  
 725 730 735

Glu Glu Cys Ser Leu Pro Gly Leu Thr Cys Phe Thr His Asp Asn Asn  
 740 745 750

His Trp Gln Thr Ala Pro Phe Trp Asn Leu Gly Ser Phe Cys Ala Cys  
 755 760 765

Thr Ser Ser Asn Asn Asn Thr Tyr Trp Cys Leu Arg Thr Val Asn Glu  
 770 775 780

Thr His Asn Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu Tyr  
 785 790 795 800

Phe Asp Met Asn Thr Asp Pro Tyr Gln Leu Thr Asn Thr Val His Thr  
 805 810 815

Val Glu Arg Gly Ile Leu Asn Gln Leu His Val Gln Leu Met Glu Leu  
 820 825 830

Arg Ser Cys Gln Gly Tyr Lys Gln Cys Asn Pro Arg Pro Lys Asn Leu  
 835 840 845

Asp Val Gly Asn Lys Asp Gly Gly Ser Tyr Asp Leu His Arg Gly Gln  
 850 855 860

Leu Trp Asp Gly Trp Glu Gly  
 865 870

<210> 11  
 <211> 870  
 <212> PRT  
 <213> Homo sapiens

<400> 11

Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val Phe  
 1 5 10 15

Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg Leu Lys  
 20 25 30

Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn Ile Ile Leu  
 35 40 45

Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser Met Gln Val Met  
 50 55 60

Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly Ala His Phe Ile Asn  
 65 70 75 80

Ala Phe Val Thr Thr Pro Met Cys Cys Pro Ser Arg Ser Ser Ile Leu  
 85 90 95

Thr Gly Lys Tyr Val His Asn His Asn Thr Tyr Thr Asn Asn Glu Asn  
 100 105 110

Cys Ser Ser Pro Ser Trp Gln Ala Gln His Glu Ser Arg Thr Phe Ala  
 115 120 125  
 Val Tyr Leu Asn Ser Thr Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr  
 130 135 140  
 Leu Asn Glu Tyr Asn Gly Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp  
 145 150 155 160  
 Val Gly Leu Leu Lys Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg  
 165 170 175  
 Asn Gly Val Lys Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu  
 180 185 190  
 Thr Asp Leu Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys  
 195 200 205  
 Lys Met Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala  
 210 215 220  
 Pro His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro  
 225 230 235 240  
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn Pro  
 245 250 255  
 Asp Lys His Trp Ile Met Arg Tyr Thr Gly Pro Met Lys Pro Ile His  
 260 265 270  
 Met Glu Phe Thr Asn Met Leu Gln Arg Lys Arg Leu Gln Thr Leu Met  
 275 280 285  
 Ser Val Asp Asp Ser Met Glu Thr Ile Tyr Asn Met Leu Val Glu Thr  
 290 295 300  
 Gly Glu Leu Asp Asn Thr Tyr Ile Val Tyr Thr Ala Asp His Gly Tyr  
 305 310 315 320  
 His Ile Gly Gln Phe Gly Leu Val Lys Gly Lys Ser Met Pro Tyr Glu  
 325 330 335

Phe Asp Ile Arg Val Pro Phe Tyr Val Arg Gly Pro Asn Val Glu Ala  
 340 345 350

Gly Cys Leu Asn Pro His Ile Val Leu Asn Ile Asp Leu Ala Pro Thr  
 355 360 365

Ile Leu Asp Ile Ala Gly Leu Asp Ile Pro Ala Asp Met Asp Gly Lys  
 370 375 380

Ser Ile Leu Lys Leu Leu Asp Thr Glu Arg Pro Val Asn Arg Phe His  
 385 390 395 400

Leu Lys Lys Lys Met Arg Val Trp Arg Asp Ser Phe Leu Val Glu Arg  
 405 410 415

Gly Lys Leu Leu His Lys Arg Asp Asn Asp Lys Val Asp Ala Gln Glu  
 420 425 430

Glu Asn Phe Leu Pro Lys Tyr Gln Arg Val Lys Asp Leu Cys Gln Arg  
 435 440 445

Ala Glu Tyr Gln Thr Ala Cys Glu Gln Leu Gly Gln Lys Trp Gln Cys  
 450 455 460

Val Glu Asp Ala Thr Gly Lys Leu Lys Leu His Lys Cys Lys Gly Pro  
 465 470 475 480

Met Arg Leu Gly Gly Ser Arg Ala Leu Ser Asn Leu Val Pro Lys Tyr  
 485 490 495

Tyr Gly Gln Gly Ser Glu Ala Cys Thr Cys Asp Ser Gly Asp Tyr Lys  
 500 505 510

Leu Ser Leu Ala Gly Arg Arg Lys Lys Leu Phe Lys Lys Lys Tyr Lys  
 515 520 525

Ala Ser Tyr Val Arg Ser Arg Ser Ile Arg Ser Val Ala Ile Glu Val  
 530 535 540

Asp Gly Arg Val Tyr His Val Gly Leu Gly Asp Ala Ala Gln Pro Arg  
 545 550 555 560

Asn Leu Thr Lys Arg His Trp Pro Gly Ala Pro Glu Asp Gln Asp Asp  
 565 570 575

Lys Asp Gly Gly Asp Phe Ser Gly Thr Gly Gly Leu Pro Asp Tyr Ser  
 580 585 590

Ala Ala Asn Pro Ile Lys Val Thr His Arg Cys Tyr Ile Leu Glu Asn  
 595 600 605

Asp Thr Val Gln Cys Asp Leu Asp Leu Tyr Lys Ser Leu Gln Ala Trp  
 610 615 620

Lys Asp His Lys Leu His Ile Asp His Glu Ile Glu Thr Leu Gln Asn  
 625 630 635 640

Lys Ile Lys Asn Leu Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg  
 645 650 655

Pro Glu Glu Cys Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys  
 660 665 670

Gly Arg Leu Lys His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly  
 675 680 685

Leu Gln Glu Lys Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys  
 690 695 700

Lys Lys Leu Arg Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys  
 705 710 715 720

Ser Met Pro Gly Leu Thr Cys Phe Thr His Asp Asn Gln His Trp Gln  
 725 730 735

Thr Ala Pro Phe Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr Ser Ala  
 740 745 750

Asn Asn Asn Thr Tyr Trp Cys Met Arg Thr Ile Asn Glu Thr His Asn  
 755 760 765

Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu Tyr Phe Asp Leu  
 770 775 780

Asn Thr Asp Pro Tyr Gln Leu Met Asn Ala Val Asn Thr Leu Asp Arg

785		790		795		800
Asp Val Leu Asn Gln Leu His Val Gln Leu Met Glu Leu Arg Ser Cys						
		805		810		815
Lys Gly Tyr Lys Gln Cys Asn Pro Arg Thr Arg Asn Met Asp Leu Gly						
		820		825		830
Leu Lys Asp Gly Gly Ser Tyr Glu Gln Tyr Arg Gln Phe Gln Arg Arg						
		835		840		845
Lys Trp Pro Glu Met Lys Arg Pro Ser Ser Lys Ser Leu Gly Gln Leu						
		850		855		860
Trp Glu Gly Trp Glu Gly						
		865		870		

51